

APRIL 2012  
SEMI-ANNUAL MONITORING OF  
GROUNDWATER AND SURFACE WATER

LINCOLN COUNTY LANDFILL  
PERMIT # 55-03  
LINCOLN COUNTY  
CROUSE, NORTH CAROLINA  
S&ME PROJECT No. 1356-07-004

Prepared for:

LINCOLN COUNTY  
5291 Crouse Road  
Crouse, North Carolina 28033

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July 20, 2012

**Notice:** This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

**Instructions:**

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- In Accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

**Solid Waste Monitoring Data Submittal Information**

Name of entity submitting data (laboratory, consultant, facility owner):

Consultant - S&amp;ME, INC.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Courtney Withers Murphy, P.G. Phone: 704-523-4726  
 E-mail: cmurphy@smeinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Lincoln County Landfill	5291 Crouse Rd. Crouse, NC 28033	55-03	.0500 and .1600	April 16-18, 2012

**Environmental Status: (Check all that apply)**

Initial/Background Monitoring  Detection Monitoring  Assessment Monitoring  Corrective Action

**Type of data submitted: (Check all that apply)**

<input checked="" type="checkbox"/> Groundwater monitoring data from monitoring wells	<input type="checkbox"/> Methane gas monitoring data
<input checked="" type="checkbox"/> Groundwater monitoring data from private water supply wells	<input type="checkbox"/> Corrective action data (specify) _____
<input checked="" type="checkbox"/> Leachate monitoring data	<input type="checkbox"/> Other(specify) _____
<input checked="" type="checkbox"/> Surface water monitoring data	

**Notification attached?**

- No. No groundwater or surface water standards or explosive methane gas limits were exceeded.
- Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
- Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

**Certification**

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Courtney W. Murphy, P.G.

Project Geologist

704-523-4726

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Signature

7-20-12  
Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:



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## 1.0 INTRODUCTION

S&ME, Inc. (S&ME) was contracted by Lincoln County to provide groundwater, surface water, and leachate monitoring services at the Lincoln County Landfill located at 5291 Crouse Road in Crouse, North Carolina. This monitoring event was conducted April 16 through April 18, 2012.

This report presents the results of the first sampling event for the year 2012 at the facility. The facility's monitoring network includes one (1) background well (MW-1A), twenty-eight (28) compliance wells, six (6) surface water sample locations, and one (1) leachate sample. The next sampling event is scheduled for October 2012.

## 2.0 GROUNDWATER LEVELS AND FLOW DATA

The water table elevations and our interpretation of the groundwater surface expressed as a potentiometric map along with groundwater flow direction are shown on *Figure 1*. Based upon the groundwater elevations in the vicinity of the landfill, groundwater in this area is projected to flow primarily to the south, with secondary flow toward the southwest and southeast toward tributaries located east and west of the landfills. Groundwater levels for the monitoring wells are presented in *Table 1*.

## 3.0 ANALYTICAL DATA

Analytical results for the landfill monitoring wells, surface water samples, and leachate sample are summarized in *Tables 2 through 8*. The detections above the NCAC 2L .0202 Groundwater Quality Standards (2L Standards), NCAC 2B surface water standards (2B Standards), and/or SW GWP Standard are highlighted in grey. Well sampling logs containing field measurements of pH, conductivity, temperature and water levels are included in *Appendix I*.

### 3.1 Monitoring Well Sampling

#### 3.1.1 MSW Area "E" and Phase 1

MSW Area "E" and Phase 1 monitoring well locations were sampled for Appendix I volatile organic compounds (VOCs) and Appendix I metals. In addition to Appendix I VOCs and metals, the groundwater analysis for background monitoring well MW-1A also included inorganic constituents iron and manganese. A summary of the detected analytes associated with this Phase of the landfill is included as *Table 2*. The monitoring well network associated with these areas include background well MW-1A, compliance wells MW-8, MW-9, and MW-10R which monitor the recently abandoned leachate pond, and compliance wells MW-12 through MW-20 which monitor down gradient and side gradient of the unlined MSW landfill Area "E" and the lined MSW landfill identified as Phase 1.

Based on the laboratory analytical reports, sixteen VOCs and thirteen metals were detected in MSW Area "E" and Phase 1 monitoring wells during the April 2012

monitoring event. Please note that monitoring well MW-8 was dry during the April 2012 sampling event and not sampled.

### **3.1.1.1 Volatile Organic Compounds (VOCs)**

Background monitoring well MW-1A had a detection of Chloroform at a concentration of 14 micrograms per liter ( $\mu\text{g}/\text{L}$ ), which is below the 2L Standard of 70  $\mu\text{g}/\text{L}$ . Both Bromoform and Chloroform have historically been detected in monitoring well MW-1A which are commonly associated with chlorinated municipal water. Due to MW-1A's close proximity to Crouse Road, it is likely the detection of Chloroform in the well is from a leaking nearby municipal water or sewer line.

No VOCs were detected in compliance monitoring wells MW-9, MW-10R, MW-12, MW-15, and MW-18.

Monitoring wells MW-13, MW-14, MW-16R, MW-17, MW-19, and MW-20 contained fifteen VOCs. Of the VOCs detected, four compounds were detected above their respective 2L Standard: 1,1-Dichloroethane, Benzene, Tetrachloroethene, and Vinyl Chloride. Please note that monitoring well MW-14 had no VOC detections above respective 2L Standards.

The analytical results for monitoring well MW-13 indicated that 1,1-Dichloroethane, Benzene, Tetrachloroethene, and Vinyl Chloride were detected above their respective 2L Standards at concentrations of 11, 4.7, 3.3, and 0.84  $\mu\text{g}/\text{L}$ , respectively.

The results for monitoring well MW-16R indicated that Benzene and Vinyl Chloride were detected above their respective 2L Standard at concentrations of 5.9 and 3.3  $\mu\text{g}/\text{L}$ , respectively.

The results for monitoring well MW-17 indicated that Tetrachloroethene was detected above its respective 2L Standard at a concentration of 1.3  $\mu\text{g}/\text{L}$ .

The results for monitoring well MW-19 indicated that 1,1-Dichloroethane and Tetrachloroethene were detected above their respective 2L Standards at concentrations of 7.5 and 1.6  $\mu\text{g}/\text{L}$ , respectively.

The results for monitoring well MW-20 indicated that 1,1-Dichloroethane was detected above its respective 2L Standard at a concentration of 8.7  $\mu\text{g}/\text{L}$ .

Monitoring wells MW-13, MW-14, MW-16R, MW-17, MW-19 and MW-20 monitor down gradient and side gradient of the unlined Area "E" landfill and the volatile organic constituents detected in these wells are associated with the unlined landfill.

### **3.1.1.2 Inorganic Constituents (Metals)**

The monitoring wells associated with the MSW Area "E" and Phase 1 landfills had one or more Appendix I metals detected. Six constituents were detected above their respective SW GWP Standard: Antimony, Chromium, Cobalt, Iron, Thallium, and Vanadium.

Antimony was detected above its SW GWP Standard of 1.4 µg/L in monitoring well MW-14 at a concentration of 4.44 J µg/L.

Chromium was detected at or above its 2L Standard of 10 µg/L in monitoring well MW-16R at a concentration of 10.6 µg/L.

Cobalt was detected above its SW GWP Standard of 70 µg/L in monitoring well MW-13 at a concentration of 270 µg/L.

Iron was detected above its 2L Standard and SW GWP of 300 µg/L in the background monitoring well MW-1A at a concentration of 1,390 µg/L.

Thallium was detected above its SW GWP Standard of 0.28 µg/L in monitoring wells MW-13 and MW-16R at concentrations of 0.844 J and 0.499 J µg/L, respectively.

Vanadium was detected above its SW GWP Standard of 0.3 µg/L in monitoring wells MW-10R and MW-12 at concentrations of 4.59 J and 4.17 J µg/L, respectively.

Vanadium was also detected above its SW GWP Standard in the background monitoring well MW-1A at a concentration of 2.49 J µg/L.

Total metal concentrations in groundwater sampled from wells are often dependant on the turbidity or suspended particulates (from the aquifer formation) retrieved with the groundwater sample. The turbidity is a function of the sampling method, well construction, how the well was developed, and the grain size/consolidation of the lithologic unit sampled. Since the unfiltered samples are acidified in the field at the time of collection, metals contained within the particulates are dissolved into the sample. Thus, the presence of turbidity in groundwater samples often results in elevated (false positive) analytical results for total metal concentrations. Therefore, the presence of elevated total metal concentrations does not necessarily correlate with groundwater impact.

Based on historical water quality data, the background well and each of the compliance wells (excluding MW-19) have contained at least one total metal at concentrations above the 2L Standards. Metal concentrations in several wells have fluctuated below and above detection limits. In background well MW-1A, beryllium, cadmium, chromium, cobalt, iron, lead, silver, and vanadium have been detected at concentrations above the 2L Standards. Based on this data, it appears that the majority of the metals detected within the monitoring wells are either naturally occurring or a product of turbidity during sampling.

### 3.1.2 MSW Phase 2

MSW Phase 2 monitoring well locations were sampled for Appendix I VOCs and Appendix I metals. A summary of the detected analytes associated with this Phase of the landfill is included as **Table 3**. The monitoring well network associated with this Phase is compliance wells MW-21 and MW-24 which monitor side gradient of the landfill and MW-25 and MW-25A which monitor the Phase 2 sump.

### 3.1.2.1 Volatile Organic Compounds (VOCs)

No VOCs were detected in the MSW Phase 2 monitoring wells during the April 2012 sampling event.

### 3.1.2.2 Inorganic Constituents (Metals)

The monitoring wells associated with the Phase 2 landfill had three or more Appendix I metals detections, one of which was detected above its respective 2L Standard or SW GWP Standard. Vanadium was detected above the SW GWP Standard of 0.3 µg/L in monitoring well MW-25A at a concentration of 3.31 J µg/L.

As previously discussed above, it appears that the majority of the metals detected within the monitoring wells are either naturally occurring or a product of turbidity during sampling.

## **3.1.3 MSW Phase 3**

MSW Phase 3 monitoring well locations were sampled for Appendix I VOCs and Appendix I metals. A summary of the detected analytes associated with this phase of the landfill is included in **Table 4**. The monitoring well network associated with this area include compliance wells MW-32R and MW-34 which monitor down gradient and side gradient of the landfill and MW-33/33A and MW-35/35A which monitor the Phase 3 sump locations.

### 3.1.3.1 Volatile Organic Compounds (VOCs)

No VOCs were detected in the MSW Phase 3 monitoring wells during the April 2012 monitoring event.

### 3.1.3.2 Inorganic Constituents (Metals)

The monitoring wells associated with the Phase 3 landfill had two or more Appendix I metals detected, one of which was detected above its respective 2L Standard or SW GWP Standard.

Vanadium was detected in monitoring wells MW-32R, MW-34, MW-35, and MW-35A at a concentrations ranging from 1.43 J to 5.75 J µg/L, which are above the SW GWP Standard of 0.3 µg/L.

As previously discussed above, it appears that the majority of the metals detected within the monitoring wells are either naturally occurring or a product of turbidity during sampling.

## **3.1.4 C&D Landfill Phase 1 and Phase 2**

C&D Landfill Phase 1 and Phase 2 monitoring well locations were sampled for Appendix I VOCs; Appendix I metals plus mercury, manganese, and iron; and four classical chemistry compounds: Chloride, Total Dissolved Solids, Sulfate, and Alkalinity. A summary of the detected analytes associated with the C&D Landfills is included as **Table 5** and **6**. The monitoring well network associated with the C&D landfill include

compliance wells MW-26, MW-27, and MW-28 which monitor Phase 1 and MW-29, MW-30, and MW-31 which monitor Phase 2.

#### **3.1.4.1 Volatile Organic Compounds (VOCs)**

C&D Landfill monitoring wells had three VOCs detected during the April 2012 monitoring event, one of which was detected above its respective 2L Standard or SW GWP Standard: Tetrachloroethene.

Tetrachloroethene was detected in monitoring well MW-28 at a concentration of 3.7 µg/L, which is above the 2L Standard of 0.7 µg/L.

#### **3.1.4.2 Inorganic Constituents (Metals)**

The monitoring wells associated with the C&D landfill had four or more metals detections, and four constituents were detected above their respective 2L Standard and/or SW GWP Standard: Chromium, Iron, Manganese, and Vanadium.

Chromium was detected in monitoring well MW-31 at a concentration of 15.0 µg/L, which is above its 2L Standard of 10µ g/L.

Iron was detected in monitoring wells MW-26, MW-27, MW-29, MW-30, and MW-31 at concentrations of 323, 743, 21,200, 1,080, and 31,100 µg/L, respectively, which are above the 2L Standard of 300 µg/L.

Manganese was detected in monitoring wells MW-27 and MW-31 at concentrations of 681 and 69.4 µg/L, respectively, which are above the 2L Standard of 50 µg/L.

Vanadium was detected in monitoring wells MW-27 and MW-31 at concentrations of 3.81 J and 13.2 J µg/L, respectively, which are above the SW GWP Standard of 0.3 µg/L.

As previously discussed above, it appears that the majority of the metals detected within the monitoring wells are either naturally occurring or a product of turbidity during sampling. Since October 2007, Iron and Manganese have been included in the analysis for the C&D wells, and since April 2008, Iron and Manganese were included in the analysis for the background well MW-1A. Iron and Manganese have been detected in MW-1A in each monitoring event that has included their analysis.

#### **3.1.4.3 Classical Chemistry Compounds**

Total Dissolved Solids, Chloride, Sulfate, and Alkalinity were analyzed for in the C&D landfill wells. The results of which are summarized in **Tables 5 and 6**. Please note that none of the classical chemistry compounds analyzed for in the C&D landfill wells exceeded any of the established 2L Standards and/or SW GWP Standards.

### **3.2 Surface Water Sampling**

Lincoln County Landfill has five (5) surface water sampling locations positioned in the tributaries located to the east, south, and west of the landfill as indicated on the attached **Figure 1**. The surface water samples were analyzed for Appendix I VOCs and Appendix

I metals plus Mercury, Iron and Manganese. Beginning with the April 2010 sampling event, a sixth surface water sample location was added to the semi-annual monitoring plan, SW-6. The addition of SW-6 to the monitoring plan was in response to the January 2009 leachate release at the facility. SW-6 is located at the discharge of the lowland area downgradient from the leachate holding tanks as indicated on the attached *Figure 1*. SW-6 was analyzed for Appendix I VOCs, Appendix I metals, Biologic Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Nitrate/Nitrite, Sulfate, Total Suspended Solids (TSS), and Phosphorous. A summary of the detected analytes associated with the surface water samples is included as *Table 7*.

Surface water samples had one volatile organic compound detected during the April 2012 sampling event. Toluene was detected in SW-6 at a concentration of 0.58 J µg/L, which is below its respective 2B Standard of 11 µg/L.

Three or more metals were detected in surface water sampling locations SW-1, SW-2, SW-3, SW-4, SW-5, and SW-6; however, only one constituent exceeded its respective 2B Standard: Iron.

Iron was detected in SW-1, SW-3, and SW-5 at concentrations of 2,970, 1,690, and 30,200 µg/L, respectively, which are above the 2B Standard of 1000 µg/L.

### **3.3 Leachate Sampling**

A sample of the leachate from the leachate collection system for the landfill was collected from the lift station prior to entering the on-site leachate holding tanks. The leachate sample was analyzed for Appendix I VOCs, Appendix I metals, BOD, COD, Nitrate/Nitrite, Sulfate, TSS, and Phosphorous. A summary of the detected analytes for the leachate is included as *Table 8*.

## **4.0 STATISTICAL ANALYSIS**

S&ME compared the water quality data with the 2L Standards and the SW GWP standards and performed a statistical evaluation of the data. S&ME utilized two statistical methods to evaluate statistically significant increases between the compliance monitoring wells and the background monitoring well (MW-1A).

The first method utilized was a one-way parametric Analysis of Variance (Parametric ANOVA). The parametric ANOVA analysis is recommended by the 1992 guidance document for parameters with fewer than 15% non-detects in a specific well.

The second method used was the Kruskal-Wallis non-parametric rank method. The Kruskal-Wallis method is recommended by the 1992 guidance document for parameters that have 15% to 90% non-detects in a specific well.

Both analyses were run for each well with a detection, then compared. If both methods showed a statistical increase for a detected parameter in a well, then both sets of data were used. If only one method showed a statistical increase for a detected parameter in a well, then the data was used for the method that corresponded with the percent non-

detects. The table below summarizes the statistical increases found by both methods. Copies of the analytical procedures used to perform both analysis used by the ChemStat® software are included in *Appendix II*. A copy of the statistical analysis results, for parameters with detections, has been included on the attached CD.

Parameter	Well I.D.	Statistical Analysis Method		Percent Non-Detects	Statistical Increase	Notes
		Parametric ANOVA	Kruskal Wallis			
Acetone	MW-13		X	58	Yes	2
Benzene	MW-13	X	X	42	Yes	
	MW-16	X	X	65	Yes	
Chloroethane	MW-13	X	X	37	Yes	2
	MW-16		X	54	Yes	1
1,4-Dichlorobenzene	MW-13		X	68	Yes	2
c-1,2,-Dichloroethene	MW-13		X	58	Yes	2
	MW-16	X	X	62	Yes	2
Methylene Chloride	MW-13	X	X	42	Yes	2
	MW-16	X	X	49	Yes	1
	MW-19		X	55	Yes	1
	MW-20		X	48	Yes	2
Tetrachloroethene	MW-13		X	61	Yes	
	MW-19		X	61	Yes	
Trichloroethene	MW-13		X	61	Yes	2
Vinyl Chloride	MW-16		X	35	Yes	
Xylenes (Total)	MW-13	X	X	51	Yes	2
	MW-16	X	X	54	Yes	2
Antimony	MW-33A		X	41	Yes	2
Arsenic	MW-13		X	55	Yes	2
Barium	MW-15	X	X	27	Yes	2
	MW-16		X	43	Yes	2
	MW-33		X	12	Yes	2
	MW-34		X	12	Yes	2
	MW-35		X	12	Yes	2
Beryllium	MW-10	X		60	No	2
	MW-15	X		49	No	2
Chromium	MW-17	X		50	No	1
Cobalt	MW-12		X	37	Yes	2
	MW-13	X	X	0	Yes	
	MW-16		X	11	No	2
	MW-34		X	35	Yes	2
Nickel	MW-17	X		56	No	2
Thallium	MW-34		X	47	Yes	2
Vanadium	MW-10	X		37	No	
Zinc	MW-12	X	X	0	Yes	2

X indicates that there was statistical increase shown using the indicated analytical method.

1 – Non-detect in April 2012

2 - Was not detected above its respective 2L standard or SW GWP standard in April 2012

#### **4.1    Volatile Organic Compounds (VOCs)**

Acetone, Benzene, Chloroethane, 1,4-Dichlorobenzene, cis-1,2-Dichloroethene, Methylene Chloride, Tetrachloroethene, Trichloroethene, and total Xylenes were found to be at statistically significant higher levels than the background well for MW-13.

Benzene, Chloroethane, cis-1,2-Dichloroethene, Methylene Chloride, total Xylenes and Vinyl Chloride were found to be at statistically significant higher levels than the background well for MW-16.

Methylene Chloride and Tetrachloroethene were found to be at statistically significant higher levels than the background well for MW-19.

Methylene Chloride was found to be at a statistically significant higher level than the background well for MW-20.

Monitor wells MW-13, MW-16, MW-19, and MW-20 are located downgradient from the unlined closed landfill Area "E".

#### **4.2    Total Metals**

Total metal concentrations in groundwater sampled from wells are often dependent on the turbidity or suspended particulates (from the aquifer formation) retrieved with the groundwater sample. The turbidity is a function of the sampling method, well construction, how the well was developed, and the grain size/consolidation of the lithologic unit sampled. Since the unfiltered samples are acidified in the field at the time of sample collection, metals contained within the particulates are dissolved into the water sample. Thus, the presence of turbidity in groundwater samples often results in elevated (false positive) analytical results for total metal concentrations. Therefore, the presence of elevated total metal concentrations does not necessarily correlate with groundwater impact.

Based on the historical water quality data, the upgradient well and each of the downgradient wells (excluding MW-19, 22, 24 and 25) have contained at least one total metal at concentrations above the 2L Standards. The statistical evaluation indicates that eight of the downgradient wells (MW-12, 13, 15, 16, 17, 33, 34, and 35) contained at least one metal at a statistically significant level higher than the background well. Metal concentrations in several wells have fluctuated between non-detect and detect. In the background well, MW-1A, beryllium, cadmium, chromium, cobalt, iron, lead, silver, and vanadium have been detected at concentrations above the 2L Standards.

## **TABLES**

**Table 1**  
**April 2012 - Water Level Elevations**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

<b>Well Identification</b>		<b>Top of Casing Elevation (ft - MSL)</b>	<b>Depth to Groundwater From Top of Casing (ft)</b>	<b>Groundwater Elevation (ft - MSL)</b>
Background Well	MW-1A	929.27	42.03	887.24
Leachate Lagoon	MW-8	840.03	>31.00	<809.03
Leachate Lagoon	MW-9	840.20	31.41	808.79
Leachate Lagoon	MW-10R	834.97	25.18	809.79
Area "E" and Phase 1	MW-12	827.57	5.49	822.08
Area "E" and Phase 1	MW-13	872.78	32.57	840.21
Area "E" and Phase 1	MW-14	871.44	31.00	840.44
Area "E" and Phase 1	MW-15	847.86	26.71	821.15
Area "E" and Phase 1	MW-16R	876.39	15.17	861.22
Area "E" and Phase 1	MW-17	899.64	35.22	864.42
Area "E" and Phase 1	MW-18	861.41	26.41	835.00
Area "E" and Phase 1	MW-19	862.40	27.06	835.34
Area "E" and Phase 1	MW-20	860.00	15.50	844.50
Phase 2	MW-21	855.91	38.59	817.32
Phase 2	MW-24	841.13	24.43	816.70
Phase 2	MW-25	838.73	27.25	811.48
Phase 2	MW-25A	838.84	27.75	811.09
C&D Phase 1	MW-26	871.19	13.28	857.91
C&D Phase 1	MW-27	880.90	18.07	862.83
C&D Phase 1	MW-28	915.68	44.15	871.53
C&D Phase 2	MW-29	879.97	38.42	841.55
C&D Phase 2	MW-30	886.35	51.90	834.45
C&D Phase 2	MW-31	879.88	30.52	849.36
Phase 3	MW-32R	827.25	15.93	811.32
Phase 3	MW-33	819.38	13.65	805.73
Phase 3	MW-33A	818.67	13.91	804.76
Phase 3	MW-34	832.77	27.13	805.64
Phase 3	MW-35	839.64	30.54	809.10
Phase 3	MW-35A	839.65	31.83	807.82

**Notes:**

(ft - MSL) - Feet Mean Sea Level

(ft) - Feet

The "A" suffix on the well locations indicates the deep well of the pair.

**Notes for Tables 2 through 8**  
**S&ME Project No. 1356-07-004**

**Notes:**

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- (1) ug/L = micrograms per liter (parts per billion)
- (2) mg/L = milligrams per liter (parts per million)
- (3) 15A NCAC 2L = North Carolina Groundwater Quality Standards
- (4) 15A NCAC 2B = North Carolina Surface Water Quality Standards
- (5) GWP ST = Solid Waste Groundwater Protection Standard
- (6) NE = No established standard
- (7) Bold and highlighted indicates above 15A NCAC 2L, 15A NCAC 2B, or SW GWP standard
- (8) Compounds not shown were not detected.
- (9) SWSL = North Carolina Department of Environment and Natural Resources Solid Waste Section Limit established in 2007
- (10) NA = Not Analyzed
- (11) J = Analyte detected is between the Method Detection Limit (MDL) and the SWSL
- (12) B = Analyte was detected in the associated method blank
- (13) D = The sample was analyzed at dilution

**Table 2**  
**April 2012 - Detected Analytes in Monitoring Wells for MSW Area "E" and Phase 1**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	NCDENR SWSL	15A NCAC 2L	Soild Waste GWP ST	MW-1A	MW-8	MW-9	MW-10R	MW-12	MW-13	MW-14	MW-15	MW-16R	MW-17	MW-18	MW-19	MW-20
1,1-Dichloroethane	5	6	NE		DRY				<b>11</b>	2.0 J		3.2 J	0.59 J		<b>7.5</b>	<b>8.7</b>
1,4 - Dichlorobenzene	1	6	NE						3.6			2.8			0.36 J	0.51 J
cis-1,2,-Dichloroethene	5	70	NE						3.1 J			8.4			0.73 J	1.5 J
Acetone	100	6000	NE						23 J				19 J			
Benzene	1	1	NE						<b>4.7</b>			<b>5.9</b>			0.82 J	0.80 J
Chlorobenzene	3	50	NE						0.48 J			2.5 J				
Chloroform	5	70	NE	14												
Ethylbenzene	1	600	NE						0.74 J			0.42 J				
Ethyl Chloride (Chloroethane)	10	3000	NE						0.82 J							
Methylene Chloride	1	5	NE						1.3	0.45 J						2.1
Tetrachloroethene	1	0.7	NE					<b>3.3</b>	0.54 J				<b>1.3</b>		<b>1.6</b>	0.62 J
Toluene	1	600	NE						0.64 J							
Trichloroethene	1	3	NE						2.2				0.45 J		1.1	1.1
Trichlorofluoromethane	1	2000	NE												0.52 J	
Vinyl chloride	1	0.03	NE					<b>0.84 J</b>				<b>3.3</b>				
Xylenes (total)	5	500	NE						5.9			1.3 J			0.51 J	0.87 J
<b>EPA Appendix I Metals Method 6010B/6020 (ug/L)</b>																
Antimony	6	NE	1.4	0.537 J			0.613 J			<b>4.44 J</b>						0.516 J
Arsenic	10	10	NE						6.98 J	5.88 J			5.72 J			
Barium	100	700	NE	35.4 J		30.6 J	65.1 J	227	97.2 J	25.3 J	64.2 J	283	91.4 J	60.1 J	33.3 J	66.7 J
Beryllium	1	NE	4				0.229 J	0.265 J			0.252 J		0.243 J			
Chromium	10	10	NE	4.82 J		2.24 J	2.52 J	2.95 J	4.96 J				<b>10.6</b>			
Cobalt	10	NE	70					20.8	<b>270</b>				28.1	33.9		
Copper	10	1000	NE	9.79 J			4.47 J	7.71 J		6.14 J			8.21 J	6.35 J		
Iron	300	300	NE	<b>1,390</b>												
Manganese	50	50	NE	15.8 J												
Nickel	50	100	NE	4.64 J			2.67 J	6.04 J	19.5 J	2.92 J		6.21 J	36.6	2.77 J		
Thallium	5.5	NE	0.28	0.113 J				0.183 J	<b>0.844 J</b>				<b>0.499 J</b>		0.155 J	
Vanadium	25	NE	0.3	<b>2.49 J</b>			<b>4.59 J</b>	<b>4.17 J</b>								
Zinc	10	1000	NE	8.21 J	▼			13.0	44.3	4.35 J	20.6		5.63 J	11.3		

**Table 3**  
**April 2012 - Detected Analytes in Monitoring Wells for MSW Phase 2**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	NCDENR SWSL	15A NCAC 2L	Soild Waste GWP ST	MW-21	MW-24	MW-25	MW-25A
<i>No Volatile Organic Compounds Detected in MSW Phase 2 Wells During April 2012 Sampling Event</i>							
<b>EPA Appendix I Metals Method 6010B/6020 (ug/L)</b>							
Antimony	6	NE	1.4				1.11 J
Barium	100	700	NE	36.7 J	128	232	45.3 J
Beryllium	1	NE	4	0.144 J	0.762 J	0.156 J	
Chromium	10	10	NE		1.02 J	9.23 J	4.67 J
Cobalt	10	NE	70				3.99 J
Copper	10	1000	NE	6.81 J		3.34 J	
Nickel	50	100	NE		2.29 J	2.67 J	
Vanadium	25	NE	0.3				<b>3.31 J</b>
Zinc	10	1000	NE		18	16.9	

**Table 4**  
**April 2012 - Detected Analytes in Monitoring Wells for MSW Phase 3**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	NCDENR SWSL	15A NCAC 2L	Soild Waste GWP ST	MW-32R	MW-33	MW-33A	MW-34	MW-35	MW-35A
<i>No Volatile Organic Compounds Detected in MSW Phase 3 Wells During April 2012 Sampling Event</i>									
<b>EPA Appendix I Metals Method 6010B/6020 (ug/L)</b>									
Antimony	6	NE	1.4			0.868 J			0.297 J
Barium	100	700	NE	20.6 J	47.7 J	4.57 J	239	55.5 J	40.4 J
Beryllium	1	NE	4	0.120 J	0.149 J		1.33	0.185 J	
Chromium	10	10	NE					1.58 J	2.27 J
Cobalt	10	NE	70				3.53 J	1.50 J	
Copper	10	1000	NE	8.58 J		2.82 J	2.59 J	7.64 J	
Nickel	50	100	NE				2.79 J		
Thallium	5.5	NE	0.28				0.207 J		
Vanadium	25	NE	0.3	<b>1.43 J</b>			<b>1.95 J</b>	<b>5.75 J</b>	<b>2.88 J</b>
Zinc	10	1000	NE			10.1	14.5	8.91 J	

**Table 5**  
**April 2012 - Detected Analytes in Monitoring Wells for C&D Phase 1**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	NCDENR SWSL	15A NCAC 2L	Soild Waste GWP ST	MW-26	MW-27	MW-28
cis-1,2,-Dichloroethene	5	70	NE		0.62 J	
Acetone	100	6000	NE		4.0 J	23 J
Tetrachloroethene	1	0.7	NE			<b>3.7</b>
<b>EPA Appendix I Metals Method 6010B/6020 (ug/L)</b>						
Antimony	6	NE	1.4		0.640 J	
Barium	100	700	NE	64.6 J	313	81.6 J
Beryllium	1	NE	4		0.648 J	0.157 J
Cadmium	1	2	NE		0.473 J	
Chromium	10	10	NE	2.93 J	2.71 J	
Cobalt	10	NE	70		9.58 J	2.66 J
Copper	10	1000	NE		10.6	
Iron	300	300	NE	<b>323</b>	<b>743</b>	
Manganese	50	50	NE	6.62 J	<b>681</b>	28.1 J
Nickel	50	100	NE		13.7 J	4.43 J
Vanadium	25	NE	0.3		<b>3.81 J</b>	
Zinc	10	1000	NE		15.4	6.31 J
<b>Classical Chemistry Compounds (mg/L)</b>						
Chloride	NE	250	NE	2.5 J	15	2.0 J
Sulfate as SO4	250	250	NE	3.6 J,B	33 J,B	1.6 J,B
Total Dissolved Solids	NE	500	NE	100	210	88
Total Alkalinity	NE	NE	NE	20	51	13 J

**Table 6**  
**April 2012 - Detected Analytes in Monitoring Wells for C&D Phase 2**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	NCDENR SWSL	15A NCAC 2L	Soild Waste GWP ST	MW-29	MW-30	MW-31
No Volatile Organic Compounds Detected During the April 2012 Sampling Event						
<b>EPA Appendix I Metals Method 6010B/6020 (ug/L)</b>						
Barium	100	700	NE	8.17 J	49.2 J	37.4 J
Beryllium	1	NE	4	0.188 J		0.494 J
Chromium	10	10	NE			<b>15.0</b>
Cobalt	10	NE	70			4.73 J
Copper	10	1000	NE			14.2
Iron	300	300	NE	<b>21,200</b>	<b>1,080</b>	<b>31,100</b>
Lead	10	15	NE			5.56 J
Manganese	50	50	NE	35.7 J	14.5 J	<b>69.4</b>
Nickel	50	100	NE		2.14 J	12.5 J
Vanadium	25	NE	0.3			<b>13.2 J</b>
Zinc	10	1000	NE			12.3
<b>Classical Chemistry Compounds (mg/L)</b>						
Chloride	NE	250	NE	3.5 J	2.1 J	2.2 J
Sulfate as SO4	250	250	NE	7.9 J,B	3.9 J,B	11 J,B
Total Dissolved Solids	NE	500	NE	170	100	110
Total Alkalinity	NE	NE	NE	64		

**Table 7**  
**April 2012 - Detected Analytes in Surface Water Samples**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	15A NCAC 2B	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6
Toluene	11						0.58 J
<b>EPA Appendix I Metals Method 6010B/6020 (ug/L)</b>							
Barium	200,000	29.9 J	21.0 J	39.2 J	23.8 J	71.2 J	44.2 J
Beryllium	6.5			0.100 J		0.147 J	
Chromium	74	1.05 J		6.33 J		4.43 J	
Cobalt	270	1.95 J		1.52 J		17.4	3.15 J
Copper	7	1.88 J		2.01 J			
Iron	1,000	<b>2,970</b>	456	<b>1,690</b>	604	<b>30,200</b>	
Manganese	NE	142	42.7 J	30.6 J	27.6 J	847	
Nickel	88	3.05 J				3.47 J	2.36 J
Vanadium	NE	2.17 J		8.90 J		6.04 J	1.96 J
Zinc	50	22.5		4.68 J		4.03 J	
<b>Classical Chemistry Compounds (mg/L)</b>							
BOD	NE	NA	NA	NA	NA	NA	12
COD	NE	NA	NA	NA	NA	NA	46
Sulfate as SO4	NE	NA	NA	NA	NA	NA	1.6 J,B
Phosphorous	NE	NA	NA	NA	NA	NA	0.15
Nitrate as N	NE	NA	NA	NA	NA	NA	0.032 J
Nitrite as N	2.7	NA	NA	NA	NA	NA	0.0096 J
Nitrate/Nitrite as N	NE	NA	NA	NA	NA	NA	0.042 J
Total Alkalinity	NE	NA	NA	NA	NA	NA	15
Total Suspended Solids	NE	NA	NA	NA	NA	NA	30

**Table 8**  
**April 2012 - Detected Analytes in Leachate**  
**Lincoln County Landfill**  
**S&ME Project No. 1356-07-004**

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	NCDENR SWSL	Lift Station
No Volatile Organic Compounds Detected During the April 2012 Sampling Event		
EPA Appendix I Metals Method 6010B/6020 (ug/L)		
Arsenic	10	91.5
Barium	100	603
Chromium	10	19.8
Cobalt	10	9.96 J
Nickel	50	36.6 J
Vanadium	25	6.93 J
Zinc	10	107
Classical Chemistry Compounds (mg/L)		
BOD	NE	32
COD	NE	430
Sulfate as SO4	250	3.9 J,B
Phosphorous	NE	1.2 D
Nitrate as N	10	0.12 J
Nitrite as N	1000	0.088 J
Nitrate/Nitrite as N	NE	0.21
Total Alkalinity	NE	1,600 D
Total Suspended Solids	NE	59

## **FIGURES**



**APPENDIX I**  
**WELL SAMPLING LOGS AND LABORATORY REPORTS**

**Surface Water and Leachate Samples**  
**Lincoln County Landfill**  
**S&ME Project 1356-07-004**



<b>Location</b>	<b>Date</b>	<b>Time Sampled</b>	<b>Sample Observations</b>
SW-1	4/17/2012	1635	Very Slightly Turbid
SW-2	4/17/2012	1625	clear
SW-3	4/17/2012	1615	clear
SW-4	4/17/2012	1550	clear
SW-5	4/17/2012	1530	Slightly Turbid
SW-6	4/18/2012	1000	Moderately Turbid
Lift Station	4/18/2012	1015	(Sampled from Pump #2 Lift Station); Moderately Turbid

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-1A

Sampling Personnel (1) Brian Wilson (2) Jimmy Addis  
Weather Conditions Sunny/Warm  
Unusual Site Conditions \_\_\_\_\_  
\_\_\_\_\_

**Water Level Data**

Measuring Point Location TOC Well Casing Volume 2.6  
Depth to Water (ft) 42.03  
Depth to Base of Well (ft) 57.00 (well casing volume = water column\*0.174)  
Water Column (ft) 14.97  
Equipment Used to Measure Depths Electric Water Level Probe

**Well Purging Data**

Date 4/16/2012 Purging Equipment \_\_\_\_\_ Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1052	6.61	25.0	0.0
	2.6	1057	6.08	25.3	0.0
	5.2	1102	5.92	24.9	0.0
Final	7.8	1108	5.90	25.4	0.0

**Well Sampling Data**

Sampling Date 4/17/2012  
Sampling Time 0835  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

**Analytical Data**

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-8

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	-
Depth to Water (ft)	30.63		
Depth to Base of Well (ft)	31.00	(well casing volume = water column*0.174)	
Water Column (ft)	0.37		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012 Purging Equipment -

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Final	-	-	-	-	-

#### Well Sampling Data

Sampling Date	-
Sampling Time	-
Sampling Equipment	-
Sample Observations	-

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Well dry (water in end cap)  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-9

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	6.8
Depth to Water (ft)	31.41		
Depth to Base of Well (ft)	70.50	(well casing volume = water column*0.174)	
Water Column (ft)	39.09		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012 Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1542	7.12	35.8	0.0
	6.8	1547	6.93	31.0	0.0
	13.6	1553	6.84	29.3	0.0
Final	20.4	1558	6.82	28.8	0.0

#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	1040
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-10R

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.1
Depth to Water (ft)	25.18		
Depth to Base of Well (ft)	31.50	(well casing volume = water column*0.174)	
Water Column (ft)	6.32		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1155	6.29	28.3	0.0
	1.1	1156	6.14	25.0	0.0
	2.2	1158	6.17	24.2	1.5
Final	3.3	1200	6.07	22.3	1.0

#### Well Sampling Data

Sampling Date 4/18/2012  
Sampling Time 1245  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-12

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.3
Depth to Water (ft)	5.49		
Depth to Base of Well (ft)	18.50	(well casing volume = water column*0.174)	
Water Column (ft)	13.01		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1223	5.80	23.5	0.0
	2.3	1225	5.92	21.4	0.0
	4.5	1227	6.00	21.6	0.0
Final	6.8	1229	5.84	18.9	0.0

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1450
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-13

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.4
Depth to Water (ft)	32.57		
Depth to Base of Well (ft)	40.50	(well casing volume = water column*0.174)	
Water Column (ft)	7.93		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012      Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1157	6.31	23.1	0.0
	1.4	1159	6.23	22.2	0.0
	2.8	1202	6.24	21.4	0.0
Final	4.1	1205	6.30	22.1	0.0

#### Well Sampling Data

Sampling Date 4/17/2012  
Sampling Time 0905  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-14

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	7.8
Depth to Water (ft)	31.00		
Depth to Base of Well (ft)	76.00	(well casing volume = water column*0.174)	
Water Column (ft)	45.00		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
<hr/>			
Initial Total Voume (Gal)	Time	pH	Temp (C)
0	1154	6.77	25.0
7.8	1201	6.48	21.1
15.7	1208	6.50	22.2
Final 23.5	1215	6.35	22.6
<hr/>			

#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	0908
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-15

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	0.7
Depth to Water (ft)	26.71		
Depth to Base of Well (ft)	30.50	(well casing volume = water column*0.174)	
Water Column (ft)	3.79		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
<hr/>			
Initial Total Voume (Gal)	Time	pH	Temp (C)
0	1301	6.24	30.8
0.7	1302	6.26	24.6
1.3	1303	5.96	23.3
Final 2.0	1304	5.93	22.1
<hr/>			

#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	0930
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-16R

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.1
Depth to Water (ft)	15.17		
Depth to Base of Well (ft)	21.60	(well casing volume = water column*0.174)	
Water Column (ft)	6.43		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012      Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1118	6.46	25.7	2.4
	1.1	1120	6.50	25.0	2.3
	2.2	1121	6.43	21.7	6.1
Final	3.4	1122	6.44	21.2	5.3

#### Well Sampling Data

Sampling Date 4/17/2012  
Sampling Time 0845  
Sampling Equipment disposable teflon bailer  
Sample Observations clear, odor

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity appears low; Temp appears high  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-17

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	0.2
Depth to Water (ft)	35.22		
Depth to Base of Well (ft)	36.50	(well casing volume = water column*0.174)	
Water Column (ft)	1.28		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012      Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1241	6.00	22.2	0.0
	0.2	1242	5.85	23.0	0.0
	-	-	-	-	-
Final	-	-	-	-	-

#### Well Sampling Data

Sampling Date 4/18/2012  
Sampling Time 1230  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high; Purged dry at 0.25 gal  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-18

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.0
Depth to Water (ft)	26.51		
Depth to Base of Well (ft)	32.00	(well casing volume = water column*0.174)	
Water Column (ft)	5.49		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012      Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1232	6.42	28.1	0.0
	1.0	11234	6.30	28.2	0.0
	-	-	-	-	-
Final	-	-	-	-	-

#### Well Sampling Data

Sampling Date 4/17/2012  
Sampling Time 0915  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also; Purged dry at 1 gal  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-19

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	7.8
Depth to Water (ft)	27.06		
Depth to Base of Well (ft)	72.00	(well casing volume = water column*0.174)	
Water Column (ft)	44.94		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
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Initial Total Voume (Gal)	Time	pH	Temp (C)
0	1231	6.49	28.8
7.8	1236	6.30	26.2
15.6	1243	6.27	25.1
Final 23.5	1248	6.26	24.7
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#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	0918
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-20

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.0
Depth to Water (ft)	15.50		
Depth to Base of Well (ft)	27.00	(well casing volume = water column*0.174)	
Water Column (ft)	11.50		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1133	6.11	24.0	0.0
	2.0	1135	6.09	22.5	0.0
	4.0	1137	5.99	20.8	0.0
Final	6.0	1140	5.92	19.7	0.0

#### Well Sampling Data

Sampling Date 4/17/2012  
Sampling Time 0855  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-21

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.0
Depth to Water (ft)	38.59		
Depth to Base of Well (ft)	44.11	(well casing volume = water column*0.174)	
Water Column (ft)	5.52		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
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Initial Total Voume (Gal)	Time	pH	Temp (C)
0	1313	5.97	24.3
1.0	1314	6.01	25.6
1.9	1316	5.91	26.7
Final 2.9	1318	5.82	25.9
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#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	0945
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-24

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.2
Depth to Water (ft)	24.43		
Depth to Base of Well (ft)	31.60	(well casing volume = water column*0.174)	
Water Column (ft)	7.17		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1208	5.80	23.6	0.0
	1.2	1209	5.89	22.9	0.0
	2.5	1212	5.76	22.7	0.0
Final	3.7	1214	5.73	21.3	0.0

#### Well Sampling Data

Sampling Date 4/18/2012  
Sampling Time 1255  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-25

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	0.7
Depth to Water (ft)	27.25		
Depth to Base of Well (ft)	31.50	(well casing volume = water column*0.174)	
Water Column (ft)	4.25		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1130	6.28	30.8	0.0
	0.7	1132	6.22	29.6	0.0
	1.5	1134	6.17	27.9	0.0
Final	-	-	-	-	-

#### Well Sampling Data

Sampling Date 4/18/2012  
Sampling Time 1035  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments pcfic Conductivity not registering on meter; Temp appears high; purged dry at 1.5 g  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-25A

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### **Water Level Data**

Measuring Point Location	TOC	Well Casing Volume	5.6
Depth to Water (ft)	27.75		
Depth to Base of Well (ft)	60.00	(well casing volume = water column*0.174)	
Water Column (ft)	32.25		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### **Well Purging Data**

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1129	7.02	34.6	0.0
	5.6	1133	6.76	28.8	0.0
	11.2	1137	6.88	26.3	0.0
Final	16.8	1144	6.71	26.6	0.0

#### **Well Sampling Data**

Sampling Date	<u>4/18/2012</u>
Sampling Time	<u>1325</u>
Sampling Equipment	<u>disposable teflon bailer</u>
Sample Observations	<u>clear</u>

#### **Analytical Data**

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-26

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.7
Depth to Water (ft)	13.28		
Depth to Base of Well (ft)	23.00	(well casing volume = water column*0.174)	
Water Column (ft)	9.72		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1402	6.30	19.8	0.4
	1.7	1403	6.28	19.7	0.4
	3.4	1405	6.18	18.2	11.2
Final	5.1	1407	6.07	20.4	0.0

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1420
Sampling Equipment	disposable teflon bailer
Sample Observations	slightly turbid

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-27

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.6
Depth to Water (ft)	18.07		
Depth to Base of Well (ft)	27.00	(well casing volume = water column*0.174)	
Water Column (ft)	8.93		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/17/2012	Purging Equipment	Disposable Teflon Bailer
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	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1416	5.47	23.0	0.3
	1.6	1417	5.48	23.2	0.4
	3.1	1419	5.46	22.8	0.3
Final	4.7	1421	5.42	18.8	0.8

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1430
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments	Specific Conductivity not registering on meter; Temp appears high also
Lab	ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-28

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.8
Depth to Water (ft)	44.15		
Depth to Base of Well (ft)	54.50	(well casing volume = water column*0.174)	
Water Column (ft)	10.35		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/17/2012	Purging Equipment	Disposable Teflon Bailer
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	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1444	5.42	26.1	0.5
	1.8	1447	5.49	23.7	0.0
	3.6	1450	5.44	23.6	0.0
Final	5.4	1453	5.41	23.3	0.0

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1310
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments	Specific Conductivity not registering on meter; Temp appears high; needs a lock
Lab	ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-29

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.1
Depth to Water (ft)	38.42		
Depth to Base of Well (ft)	45.00	(well casing volume = water column*0.174)	
Water Column (ft)	6.58		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1252	5.95	23.7	0.0
	1.1	1254	5.99	22.7	0.0
	2.3	1256	5.92	22.4	0.0
Final	3.4	1258	5.90	22.2	0.0

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1350
Sampling Equipment	disposable teflon bailer
Sample Observations	slightly turbid

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-30

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.1
Depth to Water (ft)	51.90		
Depth to Base of Well (ft)	64.00	(well casing volume = water column*0.174)	
Water Column (ft)	12.10		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1309	6.49	24.2	0.0
	2.1	1315	6.16	23.1	0.0
	4.2	1321	6.11	23.7	0.0
Final	6.3	1326	6.10	23.0	0.0

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1400
Sampling Equipment	disposable teflon bailer
Sample Observations	slightly turbid

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-31

Sampling Personnel	(1)	Courtney Murphy	(2)	Joshua Moore
Weather Conditions			Rainy/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.6
Depth to Water (ft)	30.52		
Depth to Base of Well (ft)	40.00	(well casing volume = water column*0.174)	
Water Column (ft)	9.48		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/17/2012      Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1337	6.36	23.1	0.0
	1.6	1340	5.82	22.7	0.0
	3.3	1345	5.65	21.4	0.0
Final	4.9	1349	5.80	22.0	0.0

#### Well Sampling Data

Sampling Date	4/18/2012
Sampling Time	1410
Sampling Equipment	disposable teflon bailer
Sample Observations	moderately turbid

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-32R

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.1
Depth to Water (ft)	15.93		
Depth to Base of Well (ft)	28.05	(well casing volume = water column*0.174)	
Water Column (ft)	12.12		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
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Initial Total Voume (Gal)	Time	pH	Temp (C)
0	1328	6.28	25.9
2.1	1330	6.18	21.6
4.2	1332	6.10	21.3
Final 6.3	1334	5.97	19.6
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#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	0950
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-33

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.0
Depth to Water (ft)	13.65		
Depth to Base of Well (ft)	25.30	(well casing volume = water column*0.174)	
Water Column (ft)	11.65		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012      Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1350	6.33	25.0	0.0
	2.0	1351	5.87	26.0	0.0
	4.1	1354	5.88	24.6	0.0
Final	6.1	1357	6.33	23.4	0.0

#### Well Sampling Data

Sampling Date 4/17/2012  
Sampling Time 0955  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-33A

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	8.8
Depth to Water (ft)	13.91		
Depth to Base of Well (ft)	64.55	(well casing volume = water column*0.174)	
Water Column (ft)	50.64		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
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Initial	Total Volume (Gal)	Time	pH
	0	1347	6.97
	8.8	1355	6.71
	17.6	1401	6.69
Final	26.4	1406	7.03

#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	1000
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-34

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.4
Depth to Water (ft)	27.13		
Depth to Base of Well (ft)	35.27	(well casing volume = water column*0.174)	
Water Column (ft)	8.14		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date	4/16/2012	Purging Equipment	Disposable Teflon Bailer
<hr/>			
Initial Total Voume (Gal)	Time	pH	Temp (C)
0	1446	6.02	29.7
1.4	1449	5.59	23.3
-	-	-	-
Final	-	-	-

#### Well Sampling Data

Sampling Date	4/17/2012
Sampling Time	1010
Sampling Equipment	disposable teflon bailer
Sample Observations	clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments specific Conductivity not registering on meter; Temp appears high; Purged dry at 1.4 g  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-35

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.2
Depth to Water (ft)	30.54		
Depth to Base of Well (ft)	37.25	(well casing volume = water column*0.174)	
Water Column (ft)	6.71		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### Well Purging Data

Date 4/16/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1503	5.71	21.3	0.0
	1.2	1505	5.43	19.5	0.0
	2.3	1508	5.41	20.9	0.0
Final	3.5	1511	5.55	21.6	0.0

#### Well Sampling Data

Sampling Date 4/17/2012  
Sampling Time 1025  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Project Name:** Lincoln County Landfill  
**Project Location:** Crouse, North Carolina  
**Project Number:** 1356-07-004



**Well ID** MW-35A

Sampling Personnel	(1)	Brian Wilson	(2)	Jimmy Addis
Weather Conditions			Sunny/Warm	
Unusual Site Conditions				

#### **Water Level Data**

Measuring Point Location	TOC	Well Casing Volume	6.6
Depth to Water (ft)	31.83		
Depth to Base of Well (ft)	69.69	(well casing volume = water column*0.174)	
Water Column (ft)	37.86		
Equipment Used to Measure Depths	Electric Water Level Probe		

#### **Well Purging Data**

Date 4/16/2012 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance ( $\mu$ S)
Initial	0	1501	6.78	23.3	0.0
	6.6	1509	6.36	20.8	0.0
	13.2	1515	6.60	21.2	0.0
Final	19.8	1522	6.71	22.0	0.0

#### **Well Sampling Data**

Sampling Date 4/17/2012  
Sampling Time 1028  
Sampling Equipment disposable teflon bailer  
Sample Observations clear

#### **Analytical Data**

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments Specific Conductivity not registering on meter; Temp appears high also  
Lab ENCO

**Environmental Conservation Laboratories, Inc.**

102-A Woodwinds Industrial Court

Cary NC, 27511

Phone: 919.467.3090 FAX: 919.467.3515



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Friday, April 27, 2012

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

**RE: Laboratory Results for**

**Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - App Is**

**ENCO Workorder(s): C203832**

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, April 19, 2012.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chuck Smith".

Chuck Smith

Project Manager

Enclosure(s)



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**SAMPLE SUMMARY/LABORATORY CHRONICLE**

Client ID:	5503-MW1A	Lab ID:	C203832-01	Sampled:	04/17/12 08:35	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	12:37
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:20
EPA 7470A		05/15/12		04/26/12	08:19	4/26/2012	15:38
EPA 8260B		05/01/12		04/24/12	18:48	4/25/2012	05:43

Client ID:	5503-MW9	Lab ID:	C203832-02	Sampled:	04/17/12 10:40	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	12:47
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:24
EPA 8260B		05/01/12		04/24/12	18:48	4/25/2012	06:12

Client ID:	5503-MW10R	Lab ID:	C203832-03	Sampled:	04/18/12 12:45	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/15/12		04/19/12	13:54	4/23/2012	12:49
EPA 6020A		10/15/12		04/20/12	09:00	4/24/2012	10:02
EPA 8260B		05/02/12		04/24/12	18:48	4/25/2012	06:42

Client ID:	5503-MW12	Lab ID:	C203832-04	Sampled:	04/18/12 14:50	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/15/12		04/19/12	13:54	4/23/2012	12:57
EPA 6020A		10/15/12		04/20/12	09:00	4/24/2012	10:28
EPA 8260B		05/02/12		04/24/12	18:48	4/25/2012	07:11

Client ID:	5503-MW13	Lab ID:	C203832-05	Sampled:	04/17/12 09:05	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	12:59
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:39
EPA 8260B		05/01/12		04/24/12	18:48	4/25/2012	07:41

Client ID:	5503-MW14	Lab ID:	C203832-06	Sampled:	04/17/12 09:08	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:01
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:43
EPA 8260B		05/01/12		04/24/12	20:59	4/25/2012	08:11



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Client ID:	5503-MW15	Lab ID:	C203832-07	Sampled:	04/17/12 09:30	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:04
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:47
EPA 8260B		05/01/12		04/24/12	20:45	4/25/2012	13:09

Client ID:	5503-MW16R	Lab ID:	C203832-08	Sampled:	04/17/12 08:45	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:06
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:50
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	13:38

Client ID:	5503-MW17	Lab ID:	C203832-09	Sampled:	04/18/12 12:30	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/15/12		04/19/12	13:54	4/23/2012	13:08
EPA 6020A		10/15/12		04/20/12	09:00	4/24/2012	10:54
EPA 8260B		05/02/12		04/24/12	19:06	4/25/2012	14:08

Client ID:	5503-MW18	Lab ID:	C203832-10	Sampled:	04/17/12 09:15	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:11
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	10:58
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	14:37

Client ID:	5503-MW19	Lab ID:	C203832-11	Sampled:	04/17/12 09:18	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:13
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	11:02
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	15:07

Client ID:	5503-MW20	Lab ID:	C203832-12	Sampled:	04/17/12 08:55	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:15
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	11:05
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	15:36

Client ID:	5503-MW21	Lab ID:	C203832-13	Sampled:	04/17/12 09:45	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:17
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	11:09
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	16:05



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Client ID:	5503-MW24	Lab ID:	C203832-14	Sampled:	04/18/12 12:55	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/15/12		04/19/12	13:54	4/23/2012	13:25
EPA 6020A		10/15/12		04/20/12	09:00	4/24/2012	11:13
EPA 8260B		05/02/12		04/24/12	19:06	4/25/2012	16:35

Client ID:	5503-MW25	Lab ID:	C203832-15	Sampled:	04/18/12 10:35	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/15/12		04/19/12	13:54	4/23/2012	13:28
EPA 6020A		10/15/12		04/20/12	09:00	4/24/2012	11:24
EPA 8260B		05/02/12		04/24/12	19:06	4/25/2012	17:09

Client ID:	5503-MW25A	Lab ID:	C203832-16	Sampled:	04/18/12 13:25	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/15/12		04/19/12	13:54	4/23/2012	13:46
EPA 6020A		10/15/12		04/20/12	09:00	4/24/2012	11:28
EPA 8260B		05/02/12		04/24/12	19:06	4/25/2012	17:34

Client ID:	5503-MW32R	Lab ID:	C203832-17	Sampled:	04/17/12 09:50	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:48
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	11:32
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	18:03

Client ID:	5503-MW33	Lab ID:	C203832-18	Sampled:	04/17/12 09:55	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:50
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	11:35
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	18:32

Client ID:	5503-MW33A	Lab ID:	C203832-19	Sampled:	04/17/12 10:00	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:52
EPA 6020A		10/14/12		04/20/12	09:00	4/24/2012	11:39
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	19:02

Client ID:	5503-MW34	Lab ID:	C203832-20	Sampled:	04/17/12 10:10	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/19/12	13:54	4/23/2012	13:55
EPA 6020A		10/14/12		04/20/12	09:02	4/24/2012	12:22
EPA 8260B		05/01/12		04/24/12	19:06	4/25/2012	19:31

<b>Client ID:</b> 5503-MW35		<b>Lab ID:</b> C203832-21	<b>Sampled:</b> 04/17/12 10:25	<b>Received:</b> 04/19/12 09:45
<b>Parameter</b>	<b>Hold Date/Time(s)</b>	<b>Prep Date/Time(s)</b>	<b>Analysis Date/Time(s)</b>	
EPA 6010C	10/14/12	04/19/12 08:42	4/23/2012 11:12	
EPA 6020A	10/14/12	04/20/12 09:02	4/24/2012 12:26	
EPA 8260B	05/01/12	04/24/12 19:06	4/25/2012 20:01	

  

<b>Client ID:</b> 5503-MW35A		<b>Lab ID:</b> C203832-22	<b>Sampled:</b> 04/17/12 10:28	<b>Received:</b> 04/19/12 09:45
<b>Parameter</b>	<b>Hold Date/Time(s)</b>	<b>Prep Date/Time(s)</b>	<b>Analysis Date/Time(s)</b>	
EPA 6010C	10/14/12	04/19/12 08:42	4/23/2012 11:20	
EPA 6020A	10/14/12	04/20/12 09:02	4/24/2012 12:29	
EPA 8260B	05/01/12	04/24/12 19:06	4/25/2012 20:30	

  

<b>Client ID:</b> 5503-Trip Blank		<b>Lab ID:</b> C203832-23	<b>Sampled:</b> 04/17/12 10:28	<b>Received:</b> 04/19/12 09:45
<b>Parameter</b>	<b>Hold Date/Time(s)</b>	<b>Prep Date/Time(s)</b>	<b>Analysis Date/Time(s)</b>	
EPA 8260B	05/01/12	04/25/12 09:54	4/26/2012 00:56	

**NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY**

Client ID: 5503-MW1A		Lab ID: C203832-01							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.537	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	35.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloroform	14		1	0.18	1.0	5	ug/L	EPA 8260B	
Chromium - Total	4.82	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Copper - Total	9.79	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	1390		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	15.8	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	4.64	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.113	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total	2.49	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	8.21	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW9		Lab ID: C203832-02							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	30.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.24	J	1	1.00	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW10R		Lab ID: C203832-03							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.613	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	65.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.229	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	2.52	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Copper - Total	4.47	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.67	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	4.59	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	13.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW12		Lab ID: C203832-04							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	6.98	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	227		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.265	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	2.95	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	20.8		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	7.71	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	6.04	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.183	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total	4.17	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	44.3		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW13		Lab ID: C203832-05							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	11		1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	3.6		1	0.19	1.0	1	ug/L	EPA 8260B	
Acetone	23	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Arsenic - Total	5.88	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	97.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 5503-MW13		Lab ID: C203832-05								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Benzene		4.7		1	0.15	1.0	1	ug/L	EPA 8260B	
Chlorobenzene		0.48	J	1	0.17	1.0	3	ug/L	EPA 8260B	
Chloroethane		0.82	J	1	0.23	1.0	10	ug/L	EPA 8260B	
Chromium - Total		4.96	J	1	1.00	10.0	10	ug/L	EPA 6010C	
cis-1,2-Dichloroethene		3.1	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total		270		1	1.10	10.0	10	ug/L	EPA 6010C	
Ethylbenzene		0.74	J	1	0.13	1.0	1	ug/L	EPA 8260B	
Methylene chloride		1.3		1	0.23	1.0	1	ug/L	EPA 8260B	
Nickel - Total		19.5	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene		3.3		1	0.17	1.0	1	ug/L	EPA 8260B	
Thallium - Total		0.844	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Toluene		0.64	J	1	0.14	1.0	1	ug/L	EPA 8260B	
Trichloroethene		2.2		1	0.15	1.0	1	ug/L	EPA 8260B	
Vinyl chloride		0.84	J	1	0.32	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)		5.9		1	0.45	3.0	5	ug/L	EPA 8260B	
Zinc - Total		4.35	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW14		Lab ID: C203832-06								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane		2.0	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Antimony - Total		4.44	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total		25.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total		6.14	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Methylene chloride		0.45	J	1	0.23	1.0	1	ug/L	EPA 8260B	
Nickel - Total		2.92	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene		0.54	J	1	0.17	1.0	1	ug/L	EPA 8260B	
Zinc - Total		20.6		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW15		Lab ID: C203832-07								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		64.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.252	J	1	0.100	1.00	1	ug/L	EPA 6010C	

Client ID: 5503-MW16R		Lab ID: C203832-08								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane		3.2	J	1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene		2.8		1	0.19	1.0	1	ug/L	EPA 8260B	
Arsenic - Total		5.72	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total		283		1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene		5.9		1	0.15	1.0	1	ug/L	EPA 8260B	
Chlorobenzene		2.5	J	1	0.17	1.0	3	ug/L	EPA 8260B	
Chromium - Total		10.6		1	1.00	10.0	10	ug/L	EPA 6010C	
cis-1,2-Dichloroethene		8.4		1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total		28.1		1	1.10	10.0	10	ug/L	EPA 6010C	
Ethylbenzene		0.42	J	1	0.13	1.0	1	ug/L	EPA 8260B	
Nickel - Total		6.21	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total		0.499	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vinyl chloride		3.3		1	0.32	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)		1.3	J	1	0.45	3.0	5	ug/L	EPA 8260B	
Zinc - Total		5.63	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW17		Lab ID: C203832-09								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane		0.59	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Acetone		19	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Barium - Total		91.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.243	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total		33.9		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total		8.21	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total		36.6	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethylene		1.3		1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethylene		0.45	J	1	0.15	1.0	1	ug/L	EPA 8260B	
Zinc - Total		11.3		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW18		Lab ID: C203832-10								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		60.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total		6.35	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total		2.77	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total		0.155	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	

Client ID: 5503-MW19		Lab ID: C203832-11								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane		7.5		1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene		0.36	J	1	0.19	1.0	1	ug/L	EPA 8260B	
Antimony - Total		0.516	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total		33.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene		0.82	J	1	0.15	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethylene		0.73	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Tetrachloroethylene		1.6		1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethylene		1.1		1	0.15	1.0	1	ug/L	EPA 8260B	
Trichlorofluoromethane		0.52	J	1	0.24	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)		0.51	J	1	0.45	3.0	5	ug/L	EPA 8260B	

Client ID: 5503-MW20		Lab ID: C203832-12								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane		8.7		1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene		0.51	J	1	0.19	1.0	1	ug/L	EPA 8260B	
Barium - Total		66.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene		0.80	J	1	0.15	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethylene		1.5	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Methylene chloride		2.1		1	0.23	1.0	1	ug/L	EPA 8260B	
Tetrachloroethylene		0.62	J	1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethylene		1.1		1	0.15	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)		0.87	J	1	0.45	3.0	5	ug/L	EPA 8260B	

Client ID: 5503-MW21		Lab ID: C203832-13								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		36.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.144	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Copper - Total		6.81	J	1	1.60	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW24		Lab ID: C203832-14								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes

Client ID: 5503-MW24		Lab ID: C203832-14								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		128		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.762	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total		1.02	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Nickel - Total		2.29	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Zinc - Total		18.0		1	3.80	10.0	10	ug/L	EPA 6010C	

  

Client ID: 5503-MW25		Lab ID: C203832-15								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		232		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.156	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total		9.23	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Copper - Total		3.34	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total		2.67	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Zinc - Total		16.9		1	3.80	10.0	10	ug/L	EPA 6010C	

  

Client ID: 5503-MW25A		Lab ID: C203832-16								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total		1.11	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total		45.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total		4.67	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total		3.99	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Vanadium - Total		3.31	J	1	1.40	10.0	25	ug/L	EPA 6010C	

  

Client ID: 5503-MW32R		Lab ID: C203832-17								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		20.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.120	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Copper - Total		8.58	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total		1.43	J	1	1.40	10.0	25	ug/L	EPA 6010C	

  

Client ID: 5503-MW33		Lab ID: C203832-18								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		47.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.149	J	1	0.100	1.00	1	ug/L	EPA 6010C	

  

Client ID: 5503-MW33A		Lab ID: C203832-19								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total		0.868	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total		4.57	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total		2.82	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Zinc - Total		10.1		1	3.80	10.0	10	ug/L	EPA 6010C	

  

Client ID: 5503-MW34		Lab ID: C203832-20								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		239		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		1.33		1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total		3.53	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total		2.59	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total		2.79	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total		0.207	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total		1.95	J	1	1.40	10.0	25	ug/L	EPA 6010C	

<b>Client ID:</b>	<b>5503-MW34</b>	<b>Lab ID:</b> C203832-20							
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Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Zinc - Total	14.5		1	3.80	10.0	10	ug/L	EPA 6010C	

<b>Client ID:</b>	<b>5503-MW35</b>	<b>Lab ID:</b> C203832-21							
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Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	55.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.185	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	1.58	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.50	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	7.64	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	5.75	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	8.91	J	1	3.80	10.0	10	ug/L	EPA 6010C	

<b>Client ID:</b>	<b>5503-MW35A</b>	<b>Lab ID:</b> C203832-22							
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Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.297	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	40.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.27	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	2.88	J	1	1.40	10.0	25	ug/L	EPA 6010C	

### ANALYTICAL RESULTS

**Description:** 5503-MW1A

**Lab Sample ID:** C203832-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:35

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

#### **Volatile Organic Compounds by GCMS**

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 05:43	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 05:43	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 05:43	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 05:43	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 05:43	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 05:43	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 05:43	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 05:43	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 05:43	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 05:43	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 05:43	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 05:43	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 05:43	JKG	
Chloroform [67-66-3] ^	<b>14</b>		ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 05:43	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 05:43	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 05:43	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 05:43	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 05:43	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 05:43	JKG	

**Description:** 5503-MW1A

**Lab Sample ID:** C203832-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:35

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 05:43	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 05:43	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 05:43	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>	
4-Bromofluorobenzene	54	1	50.0	107 %	51-122	2D24036	EPA 8260B	04/25/12 05:43	JKG		
Dibromofluoromethane	51	1	50.0	102 %	68-117	2D24036	EPA 8260B	04/25/12 05:43	JKG		
Toluene-d8	50	1	50.0	100 %	67-127	2D24036	EPA 8260B	04/25/12 05:43	JKG		

**Description:** 5503-MW1A**Lab Sample ID:** C203832-01**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/17/12 08:35**Work Order:** C203832**Project:** Lincoln County LF - App Is**Sampled By:** Courtney Murphy**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:38	KER	

**Description:** 5503-MW1A

**Lab Sample ID:** C203832-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:35

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>0.537</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:20	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 12:37	JDH	
<b>Barium [7440-39-3] ^</b>	<b>35.4</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 12:37	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 12:37	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 12:37	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>4.82</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 12:37	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 12:37	JDH	
<b>Copper [7440-50-8] ^</b>	<b>9.79</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 12:37	JDH	
<b>Iron [7439-89-6] ^</b>	<b>1390</b>		ug/L	1	22.0	50.0	300	EPA 6010C	04/23/12 12:37	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:37	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>15.8</b>	J	ug/L	1	1.10	10.0	50	EPA 6010C	04/23/12 12:37	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>4.64</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 12:37	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:20	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:37	JDH	
<b>Thallium [7440-28-0] ^</b>	<b>0.113</b>	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:20	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>2.49</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 12:37	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>8.21</b>	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 12:37	JDH	

**Description:** 5503-MW9

**Lab Sample ID:** C203832-02

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:40

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 06:12	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 06:12	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 06:12	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 06:12	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 06:12	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 06:12	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 06:12	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 06:12	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 06:12	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 06:12	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 06:12	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 06:12	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 06:12	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 06:12	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 06:12	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 06:12	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 06:12	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 06:12	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 06:12	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 06:12	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 06:12	JKG	

**Description:** 5503-MW9

**Lab Sample ID:** C203832-02

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:40

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 06:12	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	106 %	51-122		2D24036	EPA 8260B	04/25/12 06:12	JKG	
Dibromofluoromethane	51	1	50.0	102 %	68-117		2D24036	EPA 8260B	04/25/12 06:12	JKG	
Toluene-d8	50	1	50.0	99 %	67-127		2D24036	EPA 8260B	04/25/12 06:12	JKG	

**Description:** 5503-MW9

**Lab Sample ID:** C203832-02

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:40

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:24	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 12:47	JDH	
<b>Barium [7440-39-3] ^</b>	<b>30.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 12:47</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 12:47	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 12:47	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>2.24</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 12:47</b>	<b>JDH</b>	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 12:47	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 12:47	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:47	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 12:47	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:24	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:47	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:24	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 12:47	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 12:47	JDH	

**Description:** 5503-MW10R

**Lab Sample ID:** C203832-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 06:42	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 06:42	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 06:42	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 06:42	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 06:42	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 06:42	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 06:42	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 06:42	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 06:42	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 06:42	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 06:42	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 06:42	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 06:42	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 06:42	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 06:42	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 06:42	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 06:42	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 06:42	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 06:42	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 06:42	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 06:42	JKG	

**Description:** 5503-MW10R

**Lab Sample ID:** C203832-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 06:42	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	54	1	50.0	109 %	51-122	2D24036	EPA 8260B	04/25/12 06:42	JKG		
Dibromofluoromethane	51	1	50.0	102 %	68-117	2D24036	EPA 8260B	04/25/12 06:42	JKG		
Toluene-d8	50	1	50.0	100 %	67-127	2D24036	EPA 8260B	04/25/12 06:42	JKG		

**Description:** 5503-MW10R

**Lab Sample ID:** C203832-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>0.613</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:02	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 12:49	JDH	
<b>Barium [7440-39-3] ^</b>	<b>65.1</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 12:49	JDH	
<b>Beryllium [7440-41-7] ^</b>	<b>0.229</b>	J	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 12:49	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 12:49	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>2.52</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 12:49	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 12:49	JDH	
<b>Copper [7440-50-8] ^</b>	<b>4.47</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 12:49	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:49	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.67</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 12:49	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:02	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:49	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:02	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>4.59</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 12:49	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>13.0</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 12:49	JDH	

**Description:** 5503-MW12

**Lab Sample ID:** C203832-04

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:50

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 07:11	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 07:11	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 07:11	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 07:11	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 07:11	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 07:11	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 07:11	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 07:11	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 07:11	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 07:11	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 07:11	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 07:11	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 07:11	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 07:11	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 07:11	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 07:11	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 07:11	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 07:11	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 07:11	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 07:11	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 07:11	JKG	

**Description:** 5503-MW12

**Lab Sample ID:** C203832-04

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:50

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 07:11	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	108 %	51-122		2D24036	EPA 8260B	04/25/12 07:11	JKG	
Dibromofluoromethane	52	1	50.0	103 %	68-117		2D24036	EPA 8260B	04/25/12 07:11	JKG	
Toluene-d8	49	1	50.0	99 %	67-127		2D24036	EPA 8260B	04/25/12 07:11	JKG	

**Description:** 5503-MW12

**Lab Sample ID:** C203832-04

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:50

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:28	VLO	
<b>Arsenic [7440-38-2] ^</b>	<b>6.98</b>	J	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 12:57	JDH	
<b>Barium [7440-39-3] ^</b>	<b>227</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 12:57	JDH	
<b>Beryllium [7440-41-7] ^</b>	<b>0.265</b>	J	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 12:57	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 12:57	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>2.95</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 12:57	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>20.8</b>		ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 12:57	JDH	
<b>Copper [7440-50-8] ^</b>	<b>7.71</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 12:57	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:57	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>6.04</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 12:57	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:28	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:57	JDH	
<b>Thallium [7440-28-0] ^</b>	<b>0.183</b>	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:28	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>4.17</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 12:57	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>44.3</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 12:57	JDH	

**Description:** 5503-MW13

**Lab Sample ID:** C203832-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:05

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 07:41	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>1,1-Dichloroethane [75-34-3] ^</b>	<b>11</b>		ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 07:41	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>1,4-Dichlorobenzene [106-46-7] ^</b>	<b>3.6</b>		ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 07:41	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 07:41	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 07:41	JKG	
<b>Acetone [67-64-1] ^</b>	<b>23</b>	J	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 07:41	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 07:41	JKG	
<b>Benzene [71-43-2] ^</b>	<b>4.7</b>		ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 07:41	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 07:41	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 07:41	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 07:41	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>Chlorobenzene [108-90-7] ^</b>	<b>0.48</b>	J	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 07:41	JKG	
<b>Chloroethane [75-00-3] ^</b>	<b>0.82</b>	J	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 07:41	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>cis-1,2-Dichloroethene [156-59-2] ^</b>	<b>3.1</b>	J	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 07:41	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 07:41	JKG	
<b>Ethylbenzene [100-41-4] ^</b>	<b>0.74</b>	J	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 07:41	JKG	
<b>Methylene chloride [75-09-2] ^</b>	<b>1.3</b>		ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>Tetrachloroethene [127-18-4] ^</b>	<b>3.3</b>		ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>Toluene [108-88-3] ^</b>	<b>0.64</b>	J	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 07:41	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 07:41	JKG	
<b>Trichloroethene [79-01-6] ^</b>	<b>2.2</b>		ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 07:41	JKG	
<b>Vinyl chloride [75-01-4] ^</b>	<b>0.84</b>	J	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 07:41	JKG	
<b>Xylenes (Total) [1330-20-7] ^</b>	<b>5.9</b>		ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 07:41	JKG	

**Description:** 5503-MW13

**Lab Sample ID:** C203832-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:05

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>	
4-Bromofluorobenzene	55	1	50.0	110 %	51-122	2D24036	EPA 8260B	04/25/12 07:41	JKG		
Dibromofluoromethane	50	1	50.0	100 %	68-117	2D24036	EPA 8260B	04/25/12 07:41	JKG		
Toluene-d8	49	1	50.0	97 %	67-127	2D24036	EPA 8260B	04/25/12 07:41	JKG		

**Description:** 5503-MW13

**Lab Sample ID:** C203832-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:05

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:39	VLO	
<b>Arsenic [7440-38-2] ^</b>	<b>5.88</b>	J	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 12:59	JDH	
<b>Barium [7440-39-3] ^</b>	<b>97.2</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 12:59	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 12:59	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 12:59	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>4.96</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 12:59	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>270</b>		ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 12:59	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 12:59	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:59	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>19.5</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 12:59	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:39	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 12:59	JDH	
<b>Thallium [7440-28-0] ^</b>	<b>0.844</b>	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:39	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 12:59	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>4.35</b>	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 12:59	JDH	

**Description:** 5503-MW14

**Lab Sample ID:** C203832-06

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:08

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 08:11	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 08:11	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
<b>1,1-Dichloroethane [75-34-3] ^</b>	<b>2.0</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.13</b>	<b>1.0</b>	<b>5</b>	<b>EPA 8260B</b>	<b>04/25/12 08:11</b>	<b>JKG</b>	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 08:11	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 08:11	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 08:11	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 08:11	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 08:11	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 08:11	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 08:11	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 08:11	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 08:11	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 08:11	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 08:11	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 08:11	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 08:11	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 08:11	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 08:11	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 08:11	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 08:11	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 08:11	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 08:11	JKG	
<b>Methylene chloride [75-09-2] ^</b>	<b>0.45</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.23</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 08:11</b>	<b>JKG</b>	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
<b>Tetrachloroethene [127-18-4] ^</b>	<b>0.54</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.17</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 08:11</b>	<b>JKG</b>	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 08:11	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 08:11	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 08:11	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 08:11	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 08:11	JKG	

**Description:** 5503-MW14

**Lab Sample ID:** C203832-06

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:08

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 08:11	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	107 %	51-122		2D24036	EPA 8260B	04/25/12 08:11	JKG	
Dibromofluoromethane	50	1	50.0	100 %	68-117		2D24036	EPA 8260B	04/25/12 08:11	JKG	
Toluene-d8	51	1	50.0	103 %	67-127		2D24036	EPA 8260B	04/25/12 08:11	JKG	

**Description:** 5503-MW14

**Lab Sample ID:** C203832-06

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:08

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>4.44</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:43	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:01	JDH	
<b>Barium [7440-39-3] ^</b>	<b>25.3</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:01	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:01	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:01	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:01	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:01	JDH	
<b>Copper [7440-50-8] ^</b>	<b>6.14</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:01	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:01	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.92</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:01	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:43	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:01	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:43	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:01	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>20.6</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:01	JDH	

**Description:** 5503-MW15

**Lab Sample ID:** C203832-07

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:30

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 13:09	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 13:09	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 13:09	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 13:09	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 13:09	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 13:09	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 13:09	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 13:09	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 13:09	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 13:09	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 13:09	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 13:09	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 13:09	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 13:09	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 13:09	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 13:09	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 13:09	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 13:09	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 13:09	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 13:09	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 13:09	JKG	

**Description:** 5503-MW15**Lab Sample ID:** C203832-07**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/17/12 09:30**Work Order:** C203832**Project:** Lincoln County LF - App Is**Sampled By:** Courtney Murphy**Volatile Organic Compounds by GCMS***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 13:09	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	55	1	50.0	110 %	51-122	2D24037	EPA 8260B	04/25/12 13:09	JKG		
Dibromofluoromethane	50	1	50.0	99 %	68-117	2D24037	EPA 8260B	04/25/12 13:09	JKG		
Toluene-d8	49	1	50.0	98 %	67-127	2D24037	EPA 8260B	04/25/12 13:09	JKG		

**Description:** 5503-MW15

**Lab Sample ID:** C203832-07

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:30

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:47	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:04	JDH	
<b>Barium [7440-39-3] ^</b>	<b>64.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:04</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.252</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/23/12 13:04</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:04	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:04	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:04	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:04	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:04	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:04	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:47	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:04	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:47	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:04	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:04	JDH	

**Description:** 5503-MW16R

**Lab Sample ID:** C203832-08

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 13:38	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 13:38	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
<b>1,1-Dichloroethane [75-34-3] ^</b>	<b>3.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.13</b>	<b>1.0</b>	<b>5</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 13:38	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 13:38	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 13:38	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
<b>1,4-Dichlorobenzene [106-46-7] ^</b>	<b>2.8</b>		<b>ug/L</b>	<b>1</b>	<b>0.19</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 13:38	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 13:38	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 13:38	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 13:38	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 13:38	JKG	
<b>Benzene [71-43-2] ^</b>	<b>5.9</b>		<b>ug/L</b>	<b>1</b>	<b>0.15</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 13:38	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 13:38	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 13:38	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 13:38	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
<b>Chlorobenzene [108-90-7] ^</b>	<b>2.5</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.17</b>	<b>1.0</b>	<b>3</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 13:38	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 13:38	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
<b>cis-1,2-Dichloroethene [156-59-2] ^</b>	<b>8.4</b>		<b>ug/L</b>	<b>1</b>	<b>0.15</b>	<b>1.0</b>	<b>5</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 13:38	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 13:38	JKG	
<b>Ethylbenzene [100-41-4] ^</b>	<b>0.42</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.13</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 13:38	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 13:38	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 13:38	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 13:38	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 13:38	JKG	
<b>Vinyl chloride [75-01-4] ^</b>	<b>3.3</b>		<b>ug/L</b>	<b>1</b>	<b>0.32</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 13:38</b>	<b>JKG</b>	

**Description:** 5503-MW16R

**Lab Sample ID:** C203832-08

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	1.3	J	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 13:38	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>	
4-Bromofluorobenzene	54	1	50.0	109 %	51-122	2D24037	EPA 8260B	04/25/12 13:38	JKG		
Dibromofluoromethane	50	1	50.0	100 %	68-117	2D24037	EPA 8260B	04/25/12 13:38	JKG		
Toluene-d8	50	1	50.0	100 %	67-127	2D24037	EPA 8260B	04/25/12 13:38	JKG		

**Description:** 5503-MW16R

**Lab Sample ID:** C203832-08

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:50	VLO	
<b>Arsenic [7440-38-2] ^</b>	<b>5.72</b>	J	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:06	JDH	
<b>Barium [7440-39-3] ^</b>	<b>283</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:06	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:06	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:06	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>10.6</b>		ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:06	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>28.1</b>		ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:06	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:06	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:06	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>6.21</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:06	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:50	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:06	JDH	
<b>Thallium [7440-28-0] ^</b>	<b>0.499</b>	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:50	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:06	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>5.63</b>	J	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:06	JDH	

**Description:** 5503-MW17

**Lab Sample ID:** C203832-09

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:30

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 14:08	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 14:08	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
<b>1,1-Dichloroethane [75-34-3] ^</b>	<b>0.59</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.13</b>	<b>1.0</b>	<b>5</b>	<b>EPA 8260B</b>	<b>04/25/12 14:08</b>	<b>JKG</b>	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 14:08	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 14:08	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 14:08	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 14:08	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 14:08	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 14:08	JKG	
<b>Acetone [67-64-1] ^</b>	<b>19</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.2</b>	<b>5.0</b>	<b>100</b>	<b>EPA 8260B</b>	<b>04/25/12 14:08</b>	<b>JKG</b>	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 14:08	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 14:08	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 14:08	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 14:08	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 14:08	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 14:08	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 14:08	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 14:08	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 14:08	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 14:08	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 14:08	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 14:08	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
<b>Tetrachloroethene [127-18-4] ^</b>	<b>1.3</b>		<b>ug/L</b>	<b>1</b>	<b>0.17</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 14:08</b>	<b>JKG</b>	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 14:08	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 14:08	JKG	
<b>Trichloroethene [79-01-6] ^</b>	<b>0.45</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.15</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/25/12 14:08</b>	<b>JKG</b>	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 14:08	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 14:08	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 14:08	JKG	

**Description:** 5503-MW17

**Lab Sample ID:** C203832-09

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:30

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 14:08	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	53	1	50.0	106 %	51-122	2D24037	EPA 8260B	04/25/12 14:08	JKG		
Dibromofluoromethane	50	1	50.0	100 %	68-117	2D24037	EPA 8260B	04/25/12 14:08	JKG		
Toluene-d8	48	1	50.0	97 %	67-127	2D24037	EPA 8260B	04/25/12 14:08	JKG		

**Description:** 5503-MW17

**Lab Sample ID:** C203832-09

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:30

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:54	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:08	JDH	
<b>Barium [7440-39-3] ^</b>	<b>91.4</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:08</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.243</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/23/12 13:08</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:08	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:08	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>33.9</b>		<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 13:08</b>	<b>JDH</b>	
<b>Copper [7440-50-8] ^</b>	<b>8.21</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 13:08</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:08	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>36.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/23/12 13:08</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:54	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:08	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 10:54	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:08	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>11.3</b>		<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 13:08</b>	<b>JDH</b>	

**Description:** 5503-MW18

**Lab Sample ID:** C203832-10

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:15

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 14:37	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 14:37	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 14:37	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 14:37	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 14:37	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 14:37	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 14:37	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 14:37	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 14:37	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 14:37	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 14:37	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 14:37	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 14:37	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 14:37	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 14:37	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 14:37	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 14:37	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 14:37	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 14:37	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 14:37	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 14:37	JKG	

**Description:** 5503-MW18

**Lab Sample ID:** C203832-10

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:15

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 14:37	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	106 %	51-122		2D24037	EPA 8260B	04/25/12 14:37	JKG	
Dibromofluoromethane	50	1	50.0	101 %	68-117		2D24037	EPA 8260B	04/25/12 14:37	JKG	
Toluene-d8	50	1	50.0	100 %	67-127		2D24037	EPA 8260B	04/25/12 14:37	JKG	

**Description:** 5503-MW18

**Lab Sample ID:** C203832-10

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:15

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 10:58	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:11	JDH	
<b>Barium [7440-39-3] ^</b>	<b>60.1</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:11</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:11	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:11	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:11	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:11	JDH	
<b>Copper [7440-50-8] ^</b>	<b>6.35</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 13:11</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:11	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.77</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/23/12 13:11</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 10:58	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:11	JDH	
<b>Thallium [7440-28-0] ^</b>	<b>0.155</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.110</b>	<b>1.00</b>	<b>5.5</b>	<b>EPA 6020A</b>	<b>04/24/12 10:58</b>	<b>VLO</b>	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:11	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:11	JDH	

**Description:** 5503-MW19

**Lab Sample ID:** C203832-11

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:18

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 15:07	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
<b>1,1-Dichloroethane [75-34-3] ^</b>	<b>7.5</b>		ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 15:07	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
<b>1,4-Dichlorobenzene [106-46-7] ^</b>	<b>0.36</b>	<b>J</b>	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 15:07	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 15:07	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 15:07	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 15:07	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 15:07	JKG	
<b>Benzene [71-43-2] ^</b>	<b>0.82</b>	<b>J</b>	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 15:07	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 15:07	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 15:07	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 15:07	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 15:07	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 15:07	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
<b>cis-1,2-Dichloroethene [156-59-2] ^</b>	<b>0.73</b>	<b>J</b>	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 15:07	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 15:07	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 15:07	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
<b>Tetrachloroethene [127-18-4] ^</b>	<b>1.6</b>		ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 15:07	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 15:07	JKG	
<b>Trichloroethene [79-01-6] ^</b>	<b>1.1</b>		ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
<b>Trichlorofluoromethane [75-69-4] ^</b>	<b>0.52</b>	<b>J</b>	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 15:07	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 15:07	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 15:07	JKG	

**Description:** 5503-MW19

**Lab Sample ID:** C203832-11

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:18

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.51	J	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 15:07	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>	
4-Bromofluorobenzene	53	1	50.0	107 %	51-122	2D24037	EPA 8260B	04/25/12 15:07	JKG		
Dibromofluoromethane	51	1	50.0	102 %	68-117	2D24037	EPA 8260B	04/25/12 15:07	JKG		
Toluene-d8	51	1	50.0	101 %	67-127	2D24037	EPA 8260B	04/25/12 15:07	JKG		

**Description:** 5503-MW19

**Lab Sample ID:** C203832-11

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:18

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>0.516</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:02	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:13	JDH	
<b>Barium [7440-39-3] ^</b>	<b>33.3</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:13	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:13	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:13	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:13	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:13	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:13	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:13	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:13	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:02	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:13	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:02	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:13	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:13	JDH	

**Description:** 5503-MW20

**Lab Sample ID:** C203832-12

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 15:36	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
<b>1,1-Dichloroethane [75-34-3] ^</b>	<b>8.7</b>		ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 15:36	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
<b>1,4-Dichlorobenzene [106-46-7] ^</b>	<b>0.51</b>	<b>J</b>	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 15:36	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 15:36	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 15:36	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 15:36	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 15:36	JKG	
<b>Benzene [71-43-2] ^</b>	<b>0.80</b>	<b>J</b>	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 15:36	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 15:36	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 15:36	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 15:36	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 15:36	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 15:36	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
<b>cis-1,2-Dichloroethene [156-59-2] ^</b>	<b>1.5</b>	<b>J</b>	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 15:36	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 15:36	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 15:36	JKG	
<b>Methylene chloride [75-09-2] ^</b>	<b>2.1</b>		ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
<b>Tetrachloroethene [127-18-4] ^</b>	<b>0.62</b>	<b>J</b>	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 15:36	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 15:36	JKG	
<b>Trichloroethene [79-01-6] ^</b>	<b>1.1</b>		ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 15:36	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 15:36	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 15:36	JKG	

**Description:** 5503-MW20

**Lab Sample ID:** C203832-12

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.87	J	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 15:36	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>	
4-Bromofluorobenzene	54	1	50.0	107 %	51-122	2D24037	EPA 8260B	04/25/12 15:36	JKG		
Dibromofluoromethane	50	1	50.0	101 %	68-117	2D24037	EPA 8260B	04/25/12 15:36	JKG		
Toluene-d8	51	1	50.0	102 %	67-127	2D24037	EPA 8260B	04/25/12 15:36	JKG		

**Description:** 5503-MW20

**Lab Sample ID:** C203832-12

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 08:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:05	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:15	JDH	
<b>Barium [7440-39-3] ^</b>	<b>66.7</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:15</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:15	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:15	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:15	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:15	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:15	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:15	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:15	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:05	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:15	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:05	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:15	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:15	JDH	

**Description:** 5503-MW21

**Lab Sample ID:** C203832-13

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 16:05	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 16:05	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 16:05	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 16:05	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 16:05	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 16:05	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 16:05	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 16:05	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 16:05	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 16:05	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 16:05	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 16:05	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 16:05	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 16:05	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 16:05	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 16:05	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 16:05	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 16:05	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 16:05	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 16:05	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 16:05	JKG	

**Description:** 5503-MW21

**Lab Sample ID:** C203832-13

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 16:05	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	108 %	51-122		2D24037	EPA 8260B	04/25/12 16:05	JKG	
Dibromofluoromethane	50	1	50.0	100 %	68-117		2D24037	EPA 8260B	04/25/12 16:05	JKG	
Toluene-d8	50	1	50.0	101 %	67-127		2D24037	EPA 8260B	04/25/12 16:05	JKG	

**Description:** 5503-MW21

**Lab Sample ID:** C203832-13

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:45

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:09	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:17	JDH	
<b>Barium [7440-39-3] ^</b>	<b>36.7</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:17</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.144</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/23/12 13:17</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:17	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:17	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:17	JDH	
<b>Copper [7440-50-8] ^</b>	<b>6.81</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 13:17</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:17	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:17	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:09	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:17	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:09	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:17	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:17	JDH	

**Description:** 5503-MW24

**Lab Sample ID:** C203832-14

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 16:35	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 16:35	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 16:35	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 16:35	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 16:35	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 16:35	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 16:35	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 16:35	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 16:35	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 16:35	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 16:35	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 16:35	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 16:35	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 16:35	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 16:35	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 16:35	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 16:35	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 16:35	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 16:35	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 16:35	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 16:35	JKG	

**Description:** 5503-MW24

**Lab Sample ID:** C203832-14

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 16:35	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	55	1	50.0	109 %	51-122		2D24037	EPA 8260B	04/25/12 16:35	JKG	
Dibromofluoromethane	51	1	50.0	101 %	68-117		2D24037	EPA 8260B	04/25/12 16:35	JKG	
Toluene-d8	50	1	50.0	100 %	67-127		2D24037	EPA 8260B	04/25/12 16:35	JKG	

**Description:** 5503-MW24

**Lab Sample ID:** C203832-14

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 12:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:13	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:25	JDH	
<b>Barium [7440-39-3] ^</b>	<b>128</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:25	JDH	
<b>Beryllium [7440-41-7] ^</b>	<b>0.762</b>	J	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:25	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:25	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>1.02</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:25	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:25	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:25	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:25	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.29</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:25	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:13	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:25	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:13	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:25	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>18.0</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:25	JDH	

**Description:** 5503-MW25

**Lab Sample ID:** C203832-15

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 10:35

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 17:09	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 17:09	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 17:09	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 17:09	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 17:09	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 17:09	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 17:09	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 17:09	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 17:09	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 17:09	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 17:09	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 17:09	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 17:09	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 17:09	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 17:09	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 17:09	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 17:09	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 17:09	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 17:09	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 17:09	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 17:09	JKG	

**Description:** 5503-MW25

**Lab Sample ID:** C203832-15

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 10:35

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 17:09	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	108 %	51-122		2D24037	EPA 8260B	04/25/12 17:09	JKG	
Dibromofluoromethane	51	1	50.0	101 %	68-117		2D24037	EPA 8260B	04/25/12 17:09	JKG	
Toluene-d8	50	1	50.0	100 %	67-127		2D24037	EPA 8260B	04/25/12 17:09	JKG	

**Description:** 5503-MW25

**Lab Sample ID:** C203832-15

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 10:35

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:24	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:28	JDH	
<b>Barium [7440-39-3] ^</b>	<b>232</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:28	JDH	
<b>Beryllium [7440-41-7] ^</b>	<b>0.156</b>	J	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:28	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:28	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>9.23</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:28	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:28	JDH	
<b>Copper [7440-50-8] ^</b>	<b>3.34</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:28	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:28	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.67</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:28	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:24	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:28	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:24	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:28	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>16.9</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:28	JDH	

**Description:** 5503-MW25A

**Lab Sample ID:** C203832-16

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:25

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 17:34	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 17:34	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 17:34	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 17:34	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 17:34	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 17:34	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 17:34	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 17:34	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 17:34	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 17:34	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 17:34	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 17:34	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 17:34	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 17:34	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 17:34	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 17:34	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 17:34	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 17:34	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 17:34	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 17:34	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 17:34	JKG	

**Description:** 5503-MW25A

**Lab Sample ID:** C203832-16

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:25

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 17:34	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	107 %	51-122		2D24037	EPA 8260B	04/25/12 17:34	JKG	
Dibromofluoromethane	51	1	50.0	102 %	68-117		2D24037	EPA 8260B	04/25/12 17:34	JKG	
Toluene-d8	49	1	50.0	99 %	67-127		2D24037	EPA 8260B	04/25/12 17:34	JKG	

**Description:** 5503-MW25A

**Lab Sample ID:** C203832-16

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:25

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>1.11</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:28	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:46	JDH	
<b>Barium [7440-39-3] ^</b>	<b>45.3</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:46	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:46	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:46	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>4.67</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:46	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>3.99</b>	J	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:46	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:46	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:46	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:46	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:28	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:46	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:28	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>3.31</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:46	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:46	JDH	

**Description:** 5503-MW32R

**Lab Sample ID:** C203832-17

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:50

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 18:03	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 18:03	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 18:03	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 18:03	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 18:03	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 18:03	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 18:03	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 18:03	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 18:03	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 18:03	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 18:03	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 18:03	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 18:03	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 18:03	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 18:03	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 18:03	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 18:03	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 18:03	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 18:03	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 18:03	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 18:03	JKG	

**Description:** 5503-MW32R

**Lab Sample ID:** C203832-17

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:50

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 18:03	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	55	1	50.0	110 %	51-122		2D24037	EPA 8260B	04/25/12 18:03	JKG	
Dibromofluoromethane	50	1	50.0	100 %	68-117		2D24037	EPA 8260B	04/25/12 18:03	JKG	
Toluene-d8	50	1	50.0	100 %	67-127		2D24037	EPA 8260B	04/25/12 18:03	JKG	

**Description:** 5503-MW32R

**Lab Sample ID:** C203832-17

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:50

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:32	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:48	JDH	
<b>Barium [7440-39-3] ^</b>	<b>20.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:48</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.120</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/23/12 13:48</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:48	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:48	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:48	JDH	
<b>Copper [7440-50-8] ^</b>	<b>8.58</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 13:48</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:48	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:48	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:32	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:48	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:32	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>1.43</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/23/12 13:48</b>	<b>JDH</b>	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:48	JDH	

**Description:** 5503-MW33

**Lab Sample ID:** C203832-18

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 18:32	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 18:32	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 18:32	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 18:32	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 18:32	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 18:32	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 18:32	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 18:32	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 18:32	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 18:32	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 18:32	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 18:32	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 18:32	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 18:32	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 18:32	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 18:32	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 18:32	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 18:32	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 18:32	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 18:32	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 18:32	JKG	

**Description:** 5503-MW33

**Lab Sample ID:** C203832-18

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 18:32	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	107 %	51-122		2D24037	EPA 8260B	04/25/12 18:32	JKG	
Dibromofluoromethane	50	1	50.0	99 %	68-117		2D24037	EPA 8260B	04/25/12 18:32	JKG	
Toluene-d8	50	1	50.0	101 %	67-127		2D24037	EPA 8260B	04/25/12 18:32	JKG	

**Description:** 5503-MW33

**Lab Sample ID:** C203832-18

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 09:55

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:35	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:50	JDH	
<b>Barium [7440-39-3] ^</b>	<b>47.7</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 13:50</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.149</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/23/12 13:50</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:50	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:50	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:50	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:50	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:50	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:50	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:35	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:50	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:35	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:50	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:50	JDH	

**Description:** 5503-MW33A

**Lab Sample ID:** C203832-19

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:00

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 19:02	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 19:02	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 19:02	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 19:02	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 19:02	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 19:02	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 19:02	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 19:02	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 19:02	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 19:02	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 19:02	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 19:02	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 19:02	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 19:02	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 19:02	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 19:02	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 19:02	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 19:02	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 19:02	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 19:02	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 19:02	JKG	

**Description:** 5503-MW33A

**Lab Sample ID:** C203832-19

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:00

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 19:02	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>		<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	108 %		51-122	2D24037	EPA 8260B	04/25/12 19:02	JKG	
Dibromofluoromethane	51	1	50.0	102 %		68-117	2D24037	EPA 8260B	04/25/12 19:02	JKG	
Toluene-d8	48	1	50.0	97 %		67-127	2D24037	EPA 8260B	04/25/12 19:02	JKG	

**Description:** 5503-MW33A

**Lab Sample ID:** C203832-19

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:00

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>0.868</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:39	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:52	JDH	
<b>Barium [7440-39-3] ^</b>	<b>4.57</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:52	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:52	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:52	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:52	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:52	JDH	
<b>Copper [7440-50-8] ^</b>	<b>2.82</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:52	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:52	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:52	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:39	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:52	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:39	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:52	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>10.1</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:52	JDH	

**Description:** 5503-MW34

**Lab Sample ID:** C203832-20

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:10

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 19:31	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 19:31	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 19:31	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 19:31	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 19:31	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 19:31	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 19:31	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 19:31	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 19:31	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 19:31	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 19:31	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 19:31	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 19:31	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 19:31	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 19:31	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 19:31	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 19:31	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 19:31	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 19:31	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 19:31	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 19:31	JKG	

**Description:** 5503-MW34

**Lab Sample ID:** C203832-20

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:10

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 19:31	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	107 %	51-122		2D24037	EPA 8260B	04/25/12 19:31	JKG	
Dibromofluoromethane	50	1	50.0	101 %	68-117		2D24037	EPA 8260B	04/25/12 19:31	JKG	
Toluene-d8	48	1	50.0	97 %	67-127		2D24037	EPA 8260B	04/25/12 19:31	JKG	

**Description:** 5503-MW34

**Lab Sample ID:** C203832-20

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:10

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:22	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 13:55	JDH	
<b>Barium [7440-39-3] ^</b>	<b>239</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 13:55	JDH	
<b>Beryllium [7440-41-7] ^</b>	<b>1.33</b>		ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 13:55	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 13:55	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 13:55	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>3.53</b>	J	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 13:55	JDH	
<b>Copper [7440-50-8] ^</b>	<b>2.59</b>	J	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 13:55	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:55	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.79</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 13:55	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 13:55	JDH	
<b>Thallium [7440-28-0] ^</b>	<b>0.207</b>	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:22	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>1.95</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 13:55	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>14.5</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 13:55	JDH	

**Description:** 5503-MW35

**Lab Sample ID:** C203832-21

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:25

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 20:01	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 20:01	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 20:01	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 20:01	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 20:01	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 20:01	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 20:01	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 20:01	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 20:01	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 20:01	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 20:01	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 20:01	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 20:01	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 20:01	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 20:01	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 20:01	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 20:01	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 20:01	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 20:01	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 20:01	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 20:01	JKG	

**Description:** 5503-MW35

**Lab Sample ID:** C203832-21

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:25

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 20:01	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	105 %	51-122		2D24037	EPA 8260B	04/25/12 20:01	JKG	
Dibromofluoromethane	51	1	50.0	102 %	68-117		2D24037	EPA 8260B	04/25/12 20:01	JKG	
Toluene-d8	49	1	50.0	97 %	67-127		2D24037	EPA 8260B	04/25/12 20:01	JKG	

**Description:** 5503-MW35

**Lab Sample ID:** C203832-21

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:25

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:26	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 11:12	JDH	
<b>Barium [7440-39-3] ^</b>	<b>55.5</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.185</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 11:12	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>1.58</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	
<b>Cobalt [7440-48-4] ^</b>	<b>1.50</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	
<b>Copper [7440-50-8] ^</b>	<b>7.64</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 11:12	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 11:12	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:26	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 11:12	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:26	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>5.75</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	
<b>Zinc [7440-66-6] ^</b>	<b>8.91</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/23/12 11:12</b>	<b>JDH</b>	

**Description:** 5503-MW35A

**Lab Sample ID:** C203832-22

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:28

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/25/12 20:30	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/25/12 20:30	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/25/12 20:30	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/25/12 20:30	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/25/12 20:30	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/25/12 20:30	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/25/12 20:30	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/25/12 20:30	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/25/12 20:30	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/25/12 20:30	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/25/12 20:30	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 20:30	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/25/12 20:30	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/25/12 20:30	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/25/12 20:30	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/25/12 20:30	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/25/12 20:30	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/25/12 20:30	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/25/12 20:30	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/25/12 20:30	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/25/12 20:30	JKG	

**Description:** 5503-MW35A

**Lab Sample ID:** C203832-22

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:28

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/25/12 20:30	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	55	1	50.0	111 %	51-122		2D24037	EPA 8260B	04/25/12 20:30	JKG	
Dibromofluoromethane	51	1	50.0	101 %	68-117		2D24037	EPA 8260B	04/25/12 20:30	JKG	
Toluene-d8	50	1	50.0	100 %	67-127		2D24037	EPA 8260B	04/25/12 20:30	JKG	

**Description:** 5503-MW35A

**Lab Sample ID:** C203832-22

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/17/12 10:28

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>0.297</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:29	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/23/12 11:20	JDH	
<b>Barium [7440-39-3] ^</b>	<b>40.4</b>	J	ug/L	1	1.00	10.0	100	EPA 6010C	04/23/12 11:20	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/23/12 11:20	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/23/12 11:20	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>2.27</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/23/12 11:20	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/23/12 11:20	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/23/12 11:20	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 11:20	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/23/12 11:20	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:29	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/23/12 11:20	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:29	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>2.88</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/23/12 11:20	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/23/12 11:20	JDH	

**Description:** 5503-Trip Blank

**Lab Sample ID:** C203832-23

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/17/12 10:28

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 00:56	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 00:56	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 00:56	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 00:56	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 00:56	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 00:56	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 00:56	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 00:56	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 00:56	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 00:56	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 00:56	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 00:56	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 00:56	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 00:56	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 00:56	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 00:56	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 00:56	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 00:56	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 00:56	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 00:56	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 00:56	JKG	

**Description:** 5503-Trip Blank

**Lab Sample ID:** C203832-23

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/17/12 10:28

**Work Order:** C203832

**Project:** Lincoln County LF - App Is

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 00:56	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	55	1	50.0	109 %	51-122		2D25014	EPA 8260B	04/26/12 00:56	JKG	
Dibromofluoromethane	51	1	50.0	102 %	68-117		2D25014	EPA 8260B	04/26/12 00:56	JKG	
Toluene-d8	49	1	50.0	99 %	67-127		2D25014	EPA 8260B	04/26/12 00:56	JKG	

### QUALITY CONTROL

**Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D24036 - EPA 5030B\_MS

**Blank (2D24036-BLK1)**

Prepared: 04/24/2012 18:48 Analyzed: 04/24/2012 21:51

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
<i>Surrogate: 4-Bromofluorobenzene</i>	52			ug/L	50.0				104	51-122	

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D24036 - EPA 5030B\_MS

##### **Blank (2D24036-BLK1) Continued**

Prepared: 04/24/2012 18:48 Analyzed: 04/24/2012 21:51

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	50			ug/L	50.0		100	68-117			
Surrogate: Toluene-d8	51			ug/L	50.0		102	67-127			

##### **LCS (2D24036-BS1)**

Prepared: 04/24/2012 18:48 Analyzed: 04/24/2012 22:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		92	75-133			
Benzene	18		1.0	ug/L	20.0		92	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		101	83-117			
Toluene	18		1.0	ug/L	20.0		91	71-118			
Trichloroethene	19		1.0	ug/L	20.0		96	82-118			

##### **Matrix Spike (2D24036-MS1)**

Prepared: 04/24/2012 18:48 Analyzed: 04/24/2012 22:50

Source: C204638-18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.21 U	94	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	92	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	101	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	90	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	97	82-118			

##### **Matrix Spike Dup (2D24036-MSD1)**

Prepared: 04/24/2012 18:48 Analyzed: 04/24/2012 23:19

Source: C204638-18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	89	75-133	5	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	89	81-134	3	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	97	83-117	4	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	88	71-118	3	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	95	82-118	2	15	

Batch 2D24037 - EPA 5030B\_MS

##### **Blank (2D24037-BLK1)**

Prepared: 04/24/2012 19:06 Analyzed: 04/25/2012 10:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							

### QUALITY CONTROL

**Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D24037 - EPA 5030B\_MS

**Blank (2D24037-BLK1) Continued**

Prepared: 04/24/2012 19:06 Analyzed: 04/25/2012 10:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
<i>Surrogate: 4-Bromofluorobenzene</i>	54			ug/L	50.0		108	51-122			
<i>Surrogate: Dibromofluoromethane</i>	51			ug/L	50.0		102	68-117			
<i>Surrogate: Toluene-d8</i>	50			ug/L	50.0		100	67-127			

**LCS (2D24037-BS1)**

Prepared: 04/24/2012 19:06 Analyzed: 04/25/2012 10:41

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		90	75-133			
Benzene	23		1.0	ug/L	20.0		114	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		100	83-117			
Toluene	18		1.0	ug/L	20.0		92	71-118			

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D24037 - EPA 5030B\_MS

##### **LCS (2D24037-BS1) Continued**

Prepared: 04/24/2012 19:06 Analyzed: 04/25/2012 10:41

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Trichloroethene	21		1.0	ug/L	20.0		104	82-118			

##### **Matrix Spike (2D24037-MS1)**

Prepared: 04/24/2012 19:06 Analyzed: 04/25/2012 11:11

Source: C204638-19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	90	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	92	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	98	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	90	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	95	82-118			

##### **Matrix Spike Dup (2D24037-MSD1)**

Prepared: 04/24/2012 19:06 Analyzed: 04/25/2012 11:40

Source: C204638-19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	88	75-133	3	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134	4	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	95	83-117	3	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118	2	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	96	82-118	0.9	15	

Batch 2D25014 - EPA 5030B\_MS

##### **Blank (2D25014-BLK1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 22:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D25014 - EPA 5030B\_MS

#### **Blank (2D25014-BLK1) Continued**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 22:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
<i>Surrogate: 4-Bromofluorobenzene</i>	55			ug/L	50.0		110	51-122			
<i>Surrogate: Dibromofluoromethane</i>	50			ug/L	50.0		100	68-117			
<i>Surrogate: Toluene-d8</i>	50			ug/L	50.0		100	67-127			

#### **LCS (2D25014-BS1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 22:58

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		91	75-133			
Benzene	18		1.0	ug/L	20.0		88	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		99	83-117			
Toluene	18		1.0	ug/L	20.0		91	71-118			
Trichloroethene	19		1.0	ug/L	20.0		96	82-118			

#### **Matrix Spike (2D25014-MS1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 23:27

Source: C204638-16

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	90	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	89	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	98	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	89	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	96	82-118			

## QUALITY CONTROL

### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D25014 - EPA 5030B\_MS

#### **Matrix Spike Dup (2D25014-MSD1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 23:57

Source: C204638-16

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.21 U	85	75-133	5	20	
Benzene	17		1.0	ug/L	20.0	0.15 U	85	81-134	5	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117	5	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118	3	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	94	82-118	2	15	

### **Metals by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D26003 - EPA 7470A

#### **Blank (2D26003-BLK1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.170	U	0.200	ug/L							

#### **LCS (2D26003-BS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.89		0.200	ug/L	5.00		98	80-120			

#### **Matrix Spike (2D26003-MS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:29

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.82		0.200	ug/L	5.00	0.170 U	76	75-125			

#### **Matrix Spike Dup (2D26003-MSD1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:31

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.76		0.200	ug/L	5.00	0.170 U	75	75-125	2	25	

#### **Post Spike (2D26003-PS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:34

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.55		0.200	ug/L	5.00	0.0170	71	75-125			

### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D19007 - EPA 200.7

#### **Blank (2D19007-BLK1)**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 10:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D19007 - EPA 200.7

##### **Blank (2D19007-BLK1) Continued**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 10:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

##### **LCS (2D19007-BS1)**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 10:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	200		10.0	ug/L	200		100	80-120			
Barium	208		10.0	ug/L	200		104	80-120			
Beryllium	19.9		1.00	ug/L	20.0		100	80-120			
Cadmium	21.1		1.00	ug/L	20.0		106	80-120			
Chromium	199		10.0	ug/L	200		99	80-120			
Cobalt	206		10.0	ug/L	200		103	80-120			
Copper	196		10.0	ug/L	200		98	80-120			
Lead	201		10.0	ug/L	200		100	80-120			
Nickel	208		10.0	ug/L	200		104	80-120			
Silver	203		10.0	ug/L	200		102	80-120			
Vanadium	202		10.0	ug/L	200		101	80-120			
Zinc	207		10.0	ug/L	200		103	80-120			

##### **Matrix Spike (2D19007-MS1)**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 10:59

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	191		10.0	ug/L	200	3.32	94	75-125			
Barium	223		10.0	ug/L	200	21.7	101	75-125			
Beryllium	19.5		1.00	ug/L	20.0	0.100 U	98	75-125			
Cadmium	20.3		1.00	ug/L	20.0	0.360 U	102	75-125			
Chromium	194		10.0	ug/L	200	1.00 U	97	75-125			
Cobalt	200		10.0	ug/L	200	1.10 U	100	75-125			
Copper	191		10.0	ug/L	200	1.60 U	96	75-125			
Lead	196		10.0	ug/L	200	1.90 U	98	75-125			
Nickel	201		10.0	ug/L	200	1.80 U	100	75-125			
Silver	197		10.0	ug/L	200	1.90 U	98	75-125			
Vanadium	197		10.0	ug/L	200	1.40 U	99	75-125			
Zinc	199		10.0	ug/L	200	3.80 U	100	75-125			

##### **Matrix Spike Dup (2D19007-MSD1)**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 11:01

Source: C204219-03

## QUALITY CONTROL

### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D19007 - EPA 200.7

#### **Matrix Spike Dup (2D19007-MSD1) Continued**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 11:01

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	195		10.0	ug/L	200	3.32	96	75-125	2	20	
Barium	217		10.0	ug/L	200	21.7	98	75-125	3	20	
Beryllium	19.6		1.00	ug/L	20.0	0.100 U	98	75-125	0.5	20	
Cadmium	19.9		1.00	ug/L	20.0	0.360 U	100	75-125	2	20	
Chromium	195		10.0	ug/L	200	1.00 U	97	75-125	0.3	20	
Cobalt	203		10.0	ug/L	200	1.10 U	102	75-125	2	20	
Copper	192		10.0	ug/L	200	1.60 U	96	75-125	0.7	20	
Lead	196		10.0	ug/L	200	1.90 U	98	75-125	0.4	20	
Nickel	196		10.0	ug/L	200	1.80 U	98	75-125	2	20	
Silver	197		10.0	ug/L	200	1.90 U	98	75-125	0.03	20	
Vanadium	198		10.0	ug/L	200	1.40 U	99	75-125	0.4	20	
Zinc	195		10.0	ug/L	200	3.80 U	98	75-125	2	20	

#### **Post Spike (2D19007-PS1)**

Prepared: 04/19/2012 08:42 Analyzed: 04/23/2012 11:03

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.196		0.0100	mg/L	0.200	0.00332	96	80-120			
Barium	0.227		0.0100	mg/L	0.200	0.0217	103	80-120			
Beryllium	0.0198		0.00100	mg/L	0.0200	-4.77E-6	99	80-120			
Cadmium	0.0209		0.00100	mg/L	0.0200	3.87E-5	104	80-120			
Chromium	0.198		0.0100	mg/L	0.200	-0.000327	99	80-120			
Cobalt	0.204		0.0100	mg/L	0.200	0.000284	102	80-120			
Copper	0.194		0.0100	mg/L	0.200	0.000377	97	80-120			
Lead	0.199		0.0100	mg/L	0.200	-0.00187	101	80-120			
Nickel	0.206		0.0100	mg/L	0.200	0.000783	102	80-120			
Silver	0.209		0.0100	mg/L	0.200	-1.33E-5	104	80-120			
Vanadium	0.201		0.0100	mg/L	0.200	0.000191	100	80-120			
Zinc	0.206		0.0100	mg/L	0.200	-0.000738	103	80-120			

Batch 2D19026 - EPA 200.7

#### **Blank (2D19026-BLK1)**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Iron	22.0	U	50.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Manganese	1.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							

### QUALITY CONTROL

**Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**
*Batch 2D19026 - EPA 200.7*
**Blank (2D19026-BLK1) Continued**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

**LCS (2D19026-BS1)**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:33

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	196		10.0	ug/L	200		98	80-120			
Barium	205		10.0	ug/L	200		103	80-120			
Beryllium	19.6		1.00	ug/L	20.0		98	80-120			
Cadmium	20.7		1.00	ug/L	20.0		103	80-120			
Chromium	195		10.0	ug/L	200		97	80-120			
Cobalt	203		10.0	ug/L	200		101	80-120			
Copper	192		10.0	ug/L	200		96	80-120			
Iron	1040		50.0	ug/L	1000		104	80-120			
Lead	199		10.0	ug/L	200		99	80-120			
Manganese	195		10.0	ug/L	200		97	80-120			
Nickel	204		10.0	ug/L	200		102	80-120			
Silver	197		10.0	ug/L	200		99	80-120			
Vanadium	197		10.0	ug/L	200		99	80-120			
Zinc	202		10.0	ug/L	200		101	80-120			

**Matrix Spike (2D19026-MS1)**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:39

**Source: C203832-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	191		10.0	ug/L	200	2.80 U	95	75-125			
Barium	238		10.0	ug/L	200	35.4	101	75-125			
Beryllium	19.5		1.00	ug/L	20.0	0.100 U	98	75-125			
Cadmium	20.4		1.00	ug/L	20.0	0.360 U	102	75-125			
Chromium	198		10.0	ug/L	200	4.82	97	75-125			
Cobalt	201		10.0	ug/L	200	1.10 U	101	75-125			
Copper	201		10.0	ug/L	200	9.79	95	75-125			
Iron	2470		50.0	ug/L	1000	1390	108	75-125			
Lead	197		10.0	ug/L	200	1.90 U	98	75-125			
Manganese	215		10.0	ug/L	200	15.8	100	75-125			
Nickel	207		10.0	ug/L	200	4.64	101	75-125			
Silver	194		10.0	ug/L	200	1.90 U	97	75-125			
Vanadium	198		10.0	ug/L	200	2.49	98	75-125			
Zinc	211		10.0	ug/L	200	8.21	101	75-125			

**Matrix Spike Dup (2D19026-MSD1)**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:41

**Source: C203832-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	195		10.0	ug/L	200	2.80 U	97	75-125	2	20	
Barium	239		10.0	ug/L	200	35.4	102	75-125	0.4	20	
Beryllium	19.8		1.00	ug/L	20.0	0.100 U	99	75-125	1	20	

### QUALITY CONTROL

**Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**
*Batch 2D19026 - EPA 200.7*
**Matrix Spike Dup (2D19026-MSD1) Continued**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:41

**Source: C203832-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cadmium	20.5		1.00	ug/L	20.0	0.360 U	103	75-125	0.4	20	
Chromium	201		10.0	ug/L	200	4.82	98	75-125	1	20	
Cobalt	203		10.0	ug/L	200	1.10 U	101	75-125	0.7	20	
Copper	203		10.0	ug/L	200	9.79	97	75-125	1	20	
Iron	2520		50.0	ug/L	1000	1390	112	75-125	2	20	
Lead	197		10.0	ug/L	200	1.90 U	98	75-125	0.1	20	
Manganese	212		10.0	ug/L	200	15.8	98	75-125	2	20	
Nickel	209		10.0	ug/L	200	4.64	102	75-125	1	20	
Silver	197		10.0	ug/L	200	1.90 U	98	75-125	1	20	
Vanadium	201		10.0	ug/L	200	2.49	99	75-125	1	20	
Zinc	212		10.0	ug/L	200	8.21	102	75-125	0.3	20	

**Post Spike (2D19026-PS1)**

Prepared: 04/19/2012 13:54 Analyzed: 04/23/2012 12:42

**Source: C203832-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.199		0.0100	mg/L	0.200	-0.000543	100	80-120			
Barium	0.243		0.0100	mg/L	0.200	0.0354	104	80-120			
Beryllium	0.0200		0.00100	mg/L	0.0200	6.14E-5	100	80-120			
Cadmium	0.0210		0.00100	mg/L	0.0200	6.12E-5	105	80-120			
Chromium	0.204		0.0100	mg/L	0.200	0.00482	100	80-120			
Cobalt	0.208		0.0100	mg/L	0.200	0.000332	104	80-120			
Copper	0.204		0.0100	mg/L	0.200	0.00979	97	80-120			
Iron	2.39		0.0500	mg/L	1.00	1.39	100	80-120			
Lead	0.205		0.0100	mg/L	0.200	-0.00121	103	80-120			
Manganese	0.213		0.0100	mg/L	0.200	0.0158	99	80-120			
Nickel	0.214		0.0100	mg/L	0.200	0.00464	104	80-120			
Silver	0.209		0.0100	mg/L	0.200	-0.000151	105	80-120			
Vanadium	0.203		0.0100	mg/L	0.200	0.00249	100	80-120			
Zinc	0.217		0.0100	mg/L	0.200	0.00821	104	80-120			

*Batch 2D20004 - EPA 3005A*
**Blank (2D20004-BLK1)**

Prepared: 04/20/2012 09:00 Analyzed: 04/24/2012 09:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

**LCS (2D20004-BS1)**

Prepared: 04/20/2012 09:00 Analyzed: 04/24/2012 09:58

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	194		2.00	ug/L	200		97	80-120			
Selenium	202		1.00	ug/L	200		101	80-120			
Thallium	197		1.00	ug/L	200		98	80-120			

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20004 - EPA 3005A

**Matrix Spike (2D20004-MS1)**

Prepared: 04/20/2012 09:00 Analyzed: 04/24/2012 10:06

Source: C203832-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	193		2.00	ug/L	200	0.613	96	75-125			
Selenium	198		1.00	ug/L	200	0.830 U	99	75-125			
Thallium	196		1.00	ug/L	200	0.110 U	98	75-125			

**Matrix Spike Dup (2D20004-MSD1)**

Prepared: 04/20/2012 09:00 Analyzed: 04/24/2012 10:09

Source: C203832-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	198		2.00	ug/L	200	0.613	99	75-125	3	20	
Selenium	198		1.00	ug/L	200	0.830 U	99	75-125	0.2	20	
Thallium	201		1.00	ug/L	200	0.110 U	101	75-125	3	20	

**Post Spike (2D20004-PS1)**

Prepared: 04/20/2012 09:00 Analyzed: 04/24/2012 10:13

Source: C203832-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	199		2.00	ug/L	200	0.613	99	80-120			
Selenium	207		1.00	ug/L	200	0.362	103	80-120			
Thallium	198		1.00	ug/L	200	0.0993	99	80-120			

Batch 2D20005 - EPA 3005A

**Blank (2D20005-BLK1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

**LCS (2D20005-BS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	196		2.00	ug/L	200		98	80-120			
Selenium	210		1.00	ug/L	200		105	80-120			
Thallium	197		1.00	ug/L	200		99	80-120			

**Matrix Spike (2D20005-MS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:58

Source: C203833-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202		2.00	ug/L	200	0.640	101	75-125			
Selenium	208		1.00	ug/L	200	0.830 U	104	75-125			
Thallium	195		1.00	ug/L	200	0.110 U	98	75-125			

**Matrix Spike Dup (2D20005-MSD1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:11

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

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Batch 2D20005 - EPA 3005A

##### **Matrix Spike Dup (2D20005-MSD1) Continued**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:11

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	0.640	102	75-125	2	20	
Selenium	209		1.00	ug/L	200	0.830 U	105	75-125	0.7	20	
Thallium	195		1.00	ug/L	200	0.110 U	97	75-125	0.3	20	

##### **Post Spike (2D20005-PS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:15

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200	0.640	103	80-120			
Selenium	211		1.00	ug/L	200	0.0955	106	80-120			
Thallium	197		1.00	ug/L	200	0.101	98	80-120			

**FLAGS/NOTES AND DEFINITIONS**

- B      The analyte was detected in the associated method blank.
- D      The sample was analyzed at dilution.
- J      The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
- U      The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
- E      The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
- MRL     Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.



## ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

4810 Executive Park Court, Suite 111  
Orlando, FL 32824  
(407) 826-5314 Fax (407) 850-5945

102-A Woodwinds Industrial Ct.  
Cary, NC 27511  
(919) 467-3090 Fax (919) 467-3515

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Client Name <b>S&amp;ME, Inc. (SM002)</b>	Project Number <b>1356-07-004</b>	Requested Analyses										Requested Turnaround Times		
Address <b>9751 Southern Pine Blvd.</b>	Project Name/Desc <b>Lincoln County LF - App Is</b>											Note: Rush requests subject to acceptance by the facility		
City/ST/Zip <b>Charlotte, NC 28273</b>	PO # / Billing info <b>56544 56553</b>											<input checked="" type="checkbox"/> Standard		
Tel <b>(704) 523-4726</b>	Fax <b>(704) 525-3953</b>	Reporting Contact <b>Courtney Murphy</b>											<input type="checkbox"/> Expedited	
Sampler(s) Name, Affiliation (Print) <b>Courtney Murphy</b>	Billing Contact <b>Barbara Ellington</b>											Due <u>/ /</u>		
Sampler(s) Signature <b>Courtney Murphy</b>	Spec/Location / Time Zone <b>Crouse, NC</b>											Lab Workorder <b>C203832</b>		
Preservation (See Codes) (Combine as necessary)														
Item #	Sample ID (Field Identification)	Collection Date <b>4/17/12</b>	Collection Time <b>0835</b>	Comp / Grab <b>6</b>	Matrix <b>GW</b>	Total # of Containers <b>4</b>	Sample Comments							
5503-MW1A														
5503-MW8														
5503-MW9														
5503-MW10R														
5503-MW12														
5503-MW13														
5503-MW14														
5503-MW15														
5503-MW16R														
5503-MW17														
5503-MW18														
5503-MW19														
<-- Total # of Containers														
Sample Kit Prepared By <b>Bianca Murphy</b>	Date/Time <b>4/19/12</b>	Requisitioned By <b>Courtney Murphy</b>	Date/Time <b>4-18-12 1700</b>	Received By <b>J. H. Murphy</b>	Date/Time <b>4-18-12 1710</b>	Received By <b>J. H. Murphy</b>	Condition Upon Receipt <b>✓ Acceptable</b>							
Comments/Special Reporting Requirements														
Relinquished By														
Cooler #'s & Temps on Receipt														
													Unacceptable	

Matrix: GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air H-HCl N-NH3 N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)  
 Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist



## ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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Client Name <b>S&amp;ME, Inc. (SM002)</b>	Project Number <b>1356-07-004</b>	Requested Analyses						Requested Turnaround Times	
Address <b>9751 Southern Pine Blvd.</b>	Project Name/Desc <b>Lincoln County LF - App Is</b>							Note: Rush requests subject to acceptance by the facility	
City/ST/Zip <b>Charlotte, NC 28273</b>	PO # Billing Info <b>56553</b>							<input checked="" type="checkbox"/> Standard	
Tel <b>(704) 523-4726</b>	Fax <b>(704) 525-3953</b>	Reporting Contact <b>Courtney Murphy</b>							<input type="checkbox"/> Expedited
Sample(s) Name, Affiliation (Print) <b>Courtney Murphy</b>		Billing Contact <b>Barbara Ellington</b>							Due <u>/ /</u>
Sample(s) Signature <i>Courtney Murphy</i>		Site location / time Zone <b>Grouse, NC</b>							Lab Workorder <b>C203832</b>
Preservation (See Codes) (Combine as necessary) <b>G</b>									
Preservation (See Codes) (Combine as necessary) <b>Ag, As, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sb, Se, Tl, V, Zn</b>									
Preservation (See Codes) (Combine as necessary) <b>Ag, As, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sb, Se, Tl, V, Zn</b>									
Preservation (See Codes) (Combine as necessary) <b>Ag, As, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sb, Se, Tl, V, Zn</b>									
Item #	Sample ID / Field Identification	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	Sample Comments		
5503-MW20	4/17/12	0855	6	GW	4	X	X		
5503-MW21	4/17/12	0945	6	GW	4	X	X		
5503-MW24	4-18-12	1255	G	GW	4	X	X		
5503-MW25	4-18-12	1035	G	GW	4	X	X		
5503-MW25A	4-18-12	1325	G	GW	4	X	X		
5503-MW32R	4/17/12	0950	6	GW	4	X	X		
5503-MW33	4/17/12	0955	6	GW	4	X	X		
5503-MW33A	4/17/12	1000	6	GW	4	X	X		
5503-MW34	4/17/12	1010	6	GW	4	X	X		
5503-MW35	4/17/12	1025	6	GW	4	X	X		
5503-MW35A	4/17/12	1028	6	GW	4	X	X		
5503-Trip Blank				VIA	2	X			
<- Total # of Containers									
Sample Kit Prepared By <b>Barbara Huang</b>	Date/Time <b>4/17/12</b>	Reinforced By <b>Courtney Murphy</b>	Date/Time <b>4/18-12 1100</b>	Received By <b>J. Ha</b>	Date/Time <b>4/18-12 1100</b>	Received By <b>J. Ha</b>	Date/Time <b>4/18-12 1100</b>	Received By <b>J. Ha</b>	Date/Time <b>4/18-12 1100</b>
Comments/Special Reporting Requirements <b>Comments: H-He, H-HCl, N-HNO3, S-H2SO4, NO-NaOH, O-Other (detail in comments)</b>									
Cookie #'s & temps on Receipt <b>0-62 11°c</b>									
Condition Upon Receipt <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable									

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SW-Sediment WW-Wastewater A-Air O-Other (detail in comments)  
 Preservation: H-He H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)  
 Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

**Environmental Conservation Laboratories, Inc.**

102-A Woodwinds Industrial Court

Cary NC, 27511

Phone: 919.467.3090 FAX: 919.467.3515



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Thursday, May 3, 2012

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

**RE: Laboratory Results for**

**Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - C&D**

**ENCO Workorder(s): C203833**

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, April 19, 2012.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chuck Smith".

Chuck Smith

Project Manager

Enclosure(s)



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**SAMPLE SUMMARY/LABORATORY CHRONICLE**

Client ID:	5503-MW26	Lab ID:	C203833-01	Sampled:	04/18/12 14:20	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/25/2012	22:51
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	10:59
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:04
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	12:33
EPA 7470A		05/16/12		04/26/12	08:19	4/26/2012	15:42
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	18:34
SM 2540C		04/25/12		04/24/12	16:29	5/2/2012	16:29

Client ID:	5503-MW27	Lab ID:	C203833-02	Sampled:	04/18/12 14:30	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/25/2012	23:07
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	10:59
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:15
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	11:54
EPA 7470A		05/16/12		04/26/12	08:19	4/26/2012	15:45
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	19:04
SM 2540C		04/25/12		04/24/12	16:29	5/2/2012	16:29

Client ID:	5503-MW28	Lab ID:	C203833-03	Sampled:	04/18/12 13:10	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/25/2012	23:24
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	11:00
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:17
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	12:37
EPA 7470A		05/16/12		04/26/12	08:19	4/26/2012	15:48
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	19:33
SM 2540C		04/25/12		04/24/12	16:29	5/2/2012	16:29

Client ID:	5503-MW29	Lab ID:	C203833-04	Sampled:	04/18/12 13:50	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/25/2012	23:40
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	11:01
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:25
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	12:41
EPA 7470A		05/16/12		04/26/12	08:19	4/26/2012	15:54
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	20:02
SM 2540C		04/25/12		04/24/12	16:29	5/2/2012	16:29



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Client ID:	5503-MW30	Lab ID:	C203833-05	Sampled:	04/18/12 14:00	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/25/2012	23:57
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	11:04
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:28
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	12:44
EPA 7470A		05/16/12		04/26/12	08:19	4/26/2012	15:56
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	20:32
SM 2540C		04/25/12		04/24/12	16:29	5/2/2012	16:29

Client ID:	5503-MW31	Lab ID:	C203833-06	Sampled:	04/18/12 14:10	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/26/2012	00:13
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	11:05
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:30
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	12:56
EPA 7470A		05/16/12		04/26/12	08:19	4/26/2012	15:58
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	21:01
SM 2540C		04/25/12		04/24/12	16:29	5/2/2012	16:29

Client ID:	5503-TripBlank	Lab ID:	C203833-07	Sampled:	04/18/12 13:10	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	21:31

**NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY**

Client ID: 5503-MW26		Lab ID: C203833-01							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	64.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloride	2.5	J	1	0.43	5.0	NE	mg/L	EPA 300.0	
Chromium - Total	2.93	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Iron - Total	323		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	6.62	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	3.6	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Total Alkalinity as CaCO3	20		1	12	15	NE	mg/L	EPA 310.2	
Total Dissolved Solids	100		1	10	10	NE	mg/L	SM 2540C	

Client ID: 5503-MW27		Lab ID: C203833-02							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	4.0	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Antimony - Total	0.640	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	313		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.648	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cadmium - Total	0.473	J	1	0.360	1.00	1	ug/L	EPA 6010C	
Chloride	15		1	0.43	5.0	NE	mg/L	EPA 300.0	
Chromium - Total	2.71	J	1	1.00	10.0	10	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	0.62	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	9.58	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	10.6		1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	743		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	681		1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	13.7	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	33	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	QB-01
Total Alkalinity as CaCO3	51		1	12	15	NE	mg/L	EPA 310.2	
Total Dissolved Solids	210		1	10	10	NE	mg/L	SM 2540C	
Vanadium - Total	3.81	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	15.4		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW28		Lab ID: C203833-03							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	23	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Barium - Total	81.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.157	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride	2.0	J	1	0.43	5.0	NE	mg/L	EPA 300.0	
Cobalt - Total	2.66	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Manganese - Total	28.1	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	4.43	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	1.6	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Tetrachloroethene	3.7		1	0.17	1.0	1	ug/L	EPA 8260B	
Total Alkalinity as CaCO3	13	J	1	12	15	NE	mg/L	EPA 310.2	
Total Dissolved Solids	88		1	10	10	NE	mg/L	SM 2540C	
Zinc - Total	6.31	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW29		Lab ID: C203833-04							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	8.17	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.188	J	1	0.100	1.00	1	ug/L	EPA 6010C	

Client ID: 5503-MW29		Lab ID: C203833-04								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Chloride		3.5	J	1	0.43	5.0	NE	mg/L	EPA 300.0	
Iron - Total		21200		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		35.7	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4		7.9	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Total Alkalinity as CaCO3		64		1	12	15	NE	mg/L	EPA 310.2	
Total Dissolved Solids		170		1	10	10	NE	mg/L	SM 2540C	

  

Client ID: 5503-MW30		Lab ID: C203833-05								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		49.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloride		2.1	J	1	0.43	5.0	NE	mg/L	EPA 300.0	
Iron - Total		1080		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		14.5	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total		2.14	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4		3.9	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Total Dissolved Solids		100		1	10	10	NE	mg/L	SM 2540C	

  

Client ID: 5503-MW31		Lab ID: C203833-06								
Analyte		Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total		37.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.494	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride		2.2	J	1	0.43	5.0	NE	mg/L	EPA 300.0	
Chromium - Total		15.0		1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total		4.73	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total		14.2		1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total		31100		1	22.0	50.0	300	ug/L	EPA 6010C	
Lead - Total		5.56	J	1	1.90	10.0	10	ug/L	EPA 6010C	
Manganese - Total		69.4		1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total		12.5	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4		11	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Total Dissolved Solids		110		1	10	10	NE	mg/L	SM 2540C	
Vanadium - Total		13.2	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total		12.3		1	3.80	10.0	10	ug/L	EPA 6010C	

### ANALYTICAL RESULTS

**Description:** 5503-MW26

**Lab Sample ID:** C203833-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:20

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

#### **Volatile Organic Compounds by GCMS**

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 18:34	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 18:34	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 18:34	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 18:34	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 18:34	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 18:34	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 18:34	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 18:34	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 18:34	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 18:34	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 18:34	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 18:34	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 18:34	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 18:34	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 18:34	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 18:34	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 18:34	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 18:34	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 18:34	JKG	

**Description:** 5503-MW26

**Lab Sample ID:** C203833-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:20

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 18:34	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 18:34	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 18:34	JKG	

<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	106 %	51-122	2D26020	EPA 8260B	04/27/12 18:34	JKG	
Dibromofluoromethane	52	1	50.0	103 %	68-117	2D26020	EPA 8260B	04/27/12 18:34	JKG	
Toluene-d8	51	1	50.0	102 %	67-127	2D26020	EPA 8260B	04/27/12 18:34	JKG	

**Description:** 5503-MW26

**Lab Sample ID:** C203833-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:20

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

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### Metals by EPA 6000/7000 Series Methods

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*^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:42	KER	

**Description:** 5503-MW26

**Lab Sample ID:** C203833-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:20

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:33	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:04	JDH	
<b>Barium [7440-39-3] ^</b>	<b>64.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:04</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:04	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:04	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>2.93</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:04</b>	<b>JDH</b>	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:04	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:04	JDH	
<b>Iron [7439-89-6] ^</b>	<b>323</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:04</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:04	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>6.62</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:04</b>	<b>JDH</b>	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:04	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:33	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:04	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:33	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:04	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:04	JDH	

**Description:** 5503-MW26**Lab Sample ID:** C203833-01**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 14:20**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Classical Chemistry Parameters***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Chloride [16887-00-6] ^	2.5	J	mg/L	1	0.43	5.0	NE	EPA 300.0	04/25/12 22:51	CCB	
Sulfate as SO4 [14808-79-8] ^	3.6	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/25/12 22:51	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	20		mg/L	1	12	15	NE	EPA 310.2	04/24/12 10:59	CCB	
Total Dissolved Solids [ECL-0156] ^	100		mg/L	1	10	10	NE	SM 2540C	05/02/12 16:29	JOC	

**Description:** 5503-MW27

**Lab Sample ID:** C203833-02

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:30

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 19:04	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 19:04	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 19:04	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 19:04	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 19:04	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 19:04	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 19:04	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 19:04	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 19:04	JKG	
<b>Acetone [67-64-1] ^</b>	<b>4.0</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.2</b>	<b>5.0</b>	<b>100</b>	<b>EPA 8260B</b>	<b>04/27/12 19:04</b>	<b>JKG</b>	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 19:04	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 19:04	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 19:04	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 19:04	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 19:04	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 19:04	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 19:04	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 19:04	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
<b>cis-1,2-Dichloroethene [156-59-2] ^</b>	<b>0.62</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.15</b>	<b>1.0</b>	<b>5</b>	<b>EPA 8260B</b>	<b>04/27/12 19:04</b>	<b>JKG</b>	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 19:04	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 19:04	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 19:04	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 19:04	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 19:04	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 19:04	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 19:04	JKG	

**Description:** 5503-MW27

**Lab Sample ID:** C203833-02

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:30

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 19:04	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 19:04	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	105 %	51-122		2D26020	EPA 8260B	04/27/12 19:04	JKG	
Dibromofluoromethane	51	1	50.0	103 %	68-117		2D26020	EPA 8260B	04/27/12 19:04	JKG	
Toluene-d8	51	1	50.0	102 %	67-127		2D26020	EPA 8260B	04/27/12 19:04	JKG	

**Description:** 5503-MW27**Lab Sample ID:** C203833-02**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 14:30**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:45	KER	

**Description:** 5503-MW27

**Lab Sample ID:** C203833-02

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:30

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
<b>Antimony [7440-36-0] ^</b>	<b>0.640</b>	J	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 11:54	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:15	JDH	
<b>Barium [7440-39-3] ^</b>	<b>313</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/24/12 11:15	JDH	
<b>Beryllium [7440-41-7] ^</b>	<b>0.648</b>	J	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:15	JDH	
<b>Cadmium [7440-43-9] ^</b>	<b>0.473</b>	J	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:15	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>2.71</b>	J	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:15	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>9.58</b>	J	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:15	JDH	
<b>Copper [7440-50-8] ^</b>	<b>10.6</b>		ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:15	JDH	
<b>Iron [7439-89-6] ^</b>	<b>743</b>		ug/L	1	22.0	50.0	300	EPA 6010C	04/24/12 11:15	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:15	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>681</b>		ug/L	1	1.10	10.0	50	EPA 6010C	04/24/12 11:15	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>13.7</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:15	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 11:54	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:15	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 11:54	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>3.81</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:15	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>15.4</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:15	JDH	

**Description:** 5503-MW27**Lab Sample ID:** C203833-02**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 14:30**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Classical Chemistry Parameters***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Chloride [16887-00-6] ^	15		mg/L	1	0.43	5.0	NE	EPA 300.0	04/25/12 23:07	CCB	
Sulfate as SO4 [14808-79-8] ^	33	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/25/12 23:07	CCB	QB-01
Total Alkalinity as CaCO3 [471-34-1] ^	51		mg/L	1	12	15	NE	EPA 310.2	04/24/12 10:59	CCB	
Total Dissolved Solids [ECL-0156] ^	210		mg/L	1	10	10	NE	SM 2540C	05/02/12 16:29	JOC	

**Description:** 5503-MW28

**Lab Sample ID:** C203833-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 19:33	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 19:33	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 19:33	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 19:33	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 19:33	JKG	
<b>Acetone [67-64-1] ^</b>	<b>23</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.2</b>	<b>5.0</b>	<b>100</b>	<b>EPA 8260B</b>	<b>04/27/12 19:33</b>	<b>JKG</b>	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 19:33	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 19:33	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 19:33	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 19:33	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 19:33	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 19:33	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 19:33	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 19:33	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 19:33	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 19:33	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
<b>Tetrachloroethene [127-18-4] ^</b>	<b>3.7</b>		<b>ug/L</b>	<b>1</b>	<b>0.17</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/27/12 19:33</b>	<b>JKG</b>	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 19:33	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 19:33	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 19:33	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 19:33	JKG	

**Description:** 5503-MW28

**Lab Sample ID:** C203833-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 19:33	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 19:33	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	53	1	50.0	105 %	51-122		2D26020	EPA 8260B	04/27/12 19:33	JKG	
Dibromofluoromethane	52	1	50.0	105 %	68-117		2D26020	EPA 8260B	04/27/12 19:33	JKG	
Toluene-d8	51	1	50.0	101 %	67-127		2D26020	EPA 8260B	04/27/12 19:33	JKG	

**Description:** 5503-MW28**Lab Sample ID:** C203833-03**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 13:10**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:48	KER	

**Description:** 5503-MW28

**Lab Sample ID:** C203833-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:37	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:17	JDH	
<b>Barium [7440-39-3] ^</b>	<b>81.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:17</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.157</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/24/12 11:17</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:17	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:17	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>2.66</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:17</b>	<b>JDH</b>	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:17	JDH	
Iron [7439-89-6] ^	22.0	U	ug/L	1	22.0	50.0	300	EPA 6010C	04/24/12 11:17	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:17	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>28.1</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:17</b>	<b>JDH</b>	
<b>Nickel [7440-02-0] ^</b>	<b>4.43</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:17</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:37	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:17	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:37	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:17	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>6.31</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:17</b>	<b>JDH</b>	

**Description:** 5503-MW28

**Lab Sample ID:** C203833-03

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Chloride [16887-00-6] ^	2.0	J	mg/L	1	0.43	5.0	NE	EPA 300.0	04/25/12 23:24	CCB	
Sulfate as SO4 [14808-79-8] ^	1.6	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/25/12 23:24	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	13	J	mg/L	1	12	15	NE	EPA 310.2	04/24/12 11:00	CCB	
Total Dissolved Solids [ECL-0156] ^	88		mg/L	1	10	10	NE	SM 2540C	05/02/12 16:29	JOC	

**Description:** 5503-MW29

**Lab Sample ID:** C203833-04

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:50

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 20:02	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 20:02	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 20:02	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 20:02	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 20:02	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 20:02	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 20:02	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 20:02	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 20:02	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 20:02	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 20:02	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 20:02	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 20:02	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 20:02	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 20:02	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 20:02	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 20:02	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 20:02	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 20:02	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 20:02	JKG	

**Description:** 5503-MW29

**Lab Sample ID:** C203833-04

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:50

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 20:02	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 20:02	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	51	1	50.0	101 %	51-122		2D26020	EPA 8260B	04/27/12 20:02	JKG	
Dibromofluoromethane	52	1	50.0	103 %	68-117		2D26020	EPA 8260B	04/27/12 20:02	JKG	
Toluene-d8	51	1	50.0	101 %	67-127		2D26020	EPA 8260B	04/27/12 20:02	JKG	

**Description:** 5503-MW29**Lab Sample ID:** C203833-04**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 13:50**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:54	KER	

**Description:** 5503-MW29

**Lab Sample ID:** C203833-04

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 13:50

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:41	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:25	JDH	
<b>Barium [7440-39-3] ^</b>	<b>8.17</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:25</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.188</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/24/12 11:25</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:25	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:25	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:25	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:25	JDH	
<b>Iron [7439-89-6] ^</b>	<b>21200</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:25</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:25	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>35.7</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:25</b>	<b>JDH</b>	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:25	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:41	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:25	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:41	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:25	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:25	JDH	

**Description:** 5503-MW29**Lab Sample ID:** C203833-04**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 13:50**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Classical Chemistry Parameters***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Chloride [16887-00-6] ^	3.5	J	mg/L	1	0.43	5.0	NE	EPA 300.0	04/25/12 23:40	CCB	
Sulfate as SO4 [14808-79-8] ^	7.9	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/25/12 23:40	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	64		mg/L	1	12	15	NE	EPA 310.2	04/24/12 11:01	CCB	
Total Dissolved Solids [ECL-0156] ^	170		mg/L	1	10	10	NE	SM 2540C	05/02/12 16:29	JOC	

**Description:** 5503-MW30

**Lab Sample ID:** C203833-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:00

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 20:32	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 20:32	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 20:32	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 20:32	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 20:32	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 20:32	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 20:32	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 20:32	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 20:32	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 20:32	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 20:32	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 20:32	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 20:32	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 20:32	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 20:32	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 20:32	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 20:32	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 20:32	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 20:32	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 20:32	JKG	

**Description:** 5503-MW30

**Lab Sample ID:** C203833-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:00

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Volatile Organic Compounds by GCMS**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 20:32	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 20:32	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	52	1	50.0	104 %	51-122		2D26020	EPA 8260B	04/27/12 20:32	JKG	
Dibromofluoromethane	51	1	50.0	102 %	68-117		2D26020	EPA 8260B	04/27/12 20:32	JKG	
Toluene-d8	50	1	50.0	100 %	67-127		2D26020	EPA 8260B	04/27/12 20:32	JKG	

**Description:** 5503-MW30**Lab Sample ID:** C203833-05**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 14:00**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:56	KER	

**Description:** 5503-MW30

**Lab Sample ID:** C203833-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:00

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:44	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:28	JDH	
<b>Barium [7440-39-3] ^</b>	<b>49.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:28</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:28	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:28	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:28	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:28	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:28	JDH	
<b>Iron [7439-89-6] ^</b>	<b>1080</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:28</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:28	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>14.5</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:28</b>	<b>JDH</b>	
<b>Nickel [7440-02-0] ^</b>	<b>2.14</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:28</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:44	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:28	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:44	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:28	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:28	JDH	

**Description:** 5503-MW30

**Lab Sample ID:** C203833-05

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:00

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Chloride [16887-00-6] ^	2.1	J	mg/L	1	0.43	5.0	NE	EPA 300.0	04/25/12 23:57	CCB	
Sulfate as SO4 [14808-79-8] ^	3.9	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/25/12 23:57	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	12	U	mg/L	1	12	15	NE	EPA 310.2	04/24/12 11:04	CCB	
Total Dissolved Solids [ECL-0156] ^	100		mg/L	1	10	10	NE	SM 2540C	05/02/12 16:29	JOC	

**Description:** 5503-MW31

**Lab Sample ID:** C203833-06

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 21:01	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 21:01	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 21:01	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 21:01	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 21:01	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 21:01	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 21:01	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 21:01	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 21:01	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 21:01	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 21:01	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 21:01	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 21:01	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 21:01	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 21:01	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 21:01	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 21:01	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 21:01	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 21:01	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 21:01	JKG	

**Description:** 5503-MW31

**Lab Sample ID:** C203833-06

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 21:01	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 21:01	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	52	1	50.0	105 %	51-122		2D26020	EPA 8260B	04/27/12 21:01	JKG	
Dibromofluoromethane	52	1	50.0	104 %	68-117		2D26020	EPA 8260B	04/27/12 21:01	JKG	
Toluene-d8	49	1	50.0	99 %	67-127		2D26020	EPA 8260B	04/27/12 21:01	JKG	

**Description:** 5503-MW31**Lab Sample ID:** C203833-06**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 14:10**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 15:58	KER	

**Description:** 5503-MW31**Lab Sample ID:** C203833-06**Received:** 04/19/12 09:45**Matrix:** Ground Water**Sampled:** 04/18/12 14:10**Work Order:** C203833**Project:** Lincoln County LF - C&D**Sampled By:** Courtney Murphy**Metals (total recoverable) by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 12:56	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:30	JDH	
<b>Barium [7440-39-3] ^</b>	<b>37.4</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.494</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:30	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>15.0</b>		<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Cobalt [7440-48-4] ^</b>	<b>4.73</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Copper [7440-50-8] ^</b>	<b>14.2</b>		<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Iron [7439-89-6] ^</b>	<b>31100</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Lead [7439-92-1] ^</b>	<b>5.56</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.90</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Manganese [7439-96-5] ^</b>	<b>69.4</b>		<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Nickel [7440-02-0] ^</b>	<b>12.5</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 12:56	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:30	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 12:56	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>13.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	
<b>Zinc [7440-66-6] ^</b>	<b>12.3</b>		<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:30</b>	<b>JDH</b>	

**Description:** 5503-MW31

**Lab Sample ID:** C203833-06

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 14:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** Courtney Murphy

### Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Chloride [16887-00-6] ^	2.2	J	mg/L	1	0.43	5.0	NE	EPA 300.0	04/26/12 00:13	CCB	
Sulfate as SO4 [14808-79-8] ^	11	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/26/12 00:13	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	12	U	mg/L	1	12	15	NE	EPA 310.2	04/24/12 11:05	CCB	
Total Dissolved Solids [ECL-0156] ^	110		mg/L	1	10	10	NE	SM 2540C	05/02/12 16:29	JOC	

**Description:** 5503-TripBlank

**Lab Sample ID:** C203833-07

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/18/12 13:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 21:31	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 21:31	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 21:31	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 21:31	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 21:31	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 21:31	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 21:31	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 21:31	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 21:31	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 21:31	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 21:31	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 21:31	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 21:31	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 21:31	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 21:31	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 21:31	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	04/27/12 21:31	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 21:31	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 21:31	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 21:31	JKG	

**Description:** 5503-TripBlank

**Lab Sample ID:** C203833-07

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/18/12 13:10

**Work Order:** C203833

**Project:** Lincoln County LF - C&D

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 21:31	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 21:31	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	52	1	50.0	105 %	51-122		2D26020	EPA 8260B	04/27/12 21:31	JKG	
Dibromofluoromethane	52	1	50.0	104 %	68-117		2D26020	EPA 8260B	04/27/12 21:31	JKG	
Toluene-d8	51	1	50.0	101 %	67-127		2D26020	EPA 8260B	04/27/12 21:31	JKG	

### QUALITY CONTROL

**Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D26020 - EPA 5030B\_MS

**Blank (2D26020-BLK1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Tetrahydrofuran	0.80	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D26020 - EPA 5030B\_MS

##### **Blank (2D26020-BLK1) Continued**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	53			ug/L	50.0		106	51-122			
Surrogate: Dibromofluoromethane	51			ug/L	50.0		101	68-117			
Surrogate: Toluene-d8	51			ug/L	50.0		101	67-127			

##### **LCS (2D26020-BS1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 13:11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0		82	75-133			
Benzene	17		1.0	ug/L	20.0		85	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		99	83-117			
Toluene	18		1.0	ug/L	20.0		88	71-118			
Trichloroethene	19		1.0	ug/L	20.0		94	82-118			

##### **Matrix Spike (2D26020-MS1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 13:41

Source: C204830-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0	0.21 U	81	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	99	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	88	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	98	82-118			

##### **Matrix Spike Dup (2D26020-MSD1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 14:10

Source: C204830-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0	0.21 U	78	75-133	4	20	
Benzene	16		1.0	ug/L	20.0	0.15 U	82	81-134	6	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	93	83-117	7	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	83	71-118	6	17	
Trichloroethene	18		1.0	ug/L	20.0	0.15 U	92	82-118	6	15	

#### **Metals by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D26003 - EPA 7470A

##### **Blank (2D26003-BLK1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.170	U	0.200	ug/L							

##### **LCS (2D26003-BS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.89		0.200	ug/L	5.00		98	80-120			

### QUALITY CONTROL

#### **Metals by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D26003 - EPA 7470A

**Matrix Spike (2D26003-MS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:29

**Source: C204219-03**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.82		0.200	ug/L	5.00	0.170 U	76	75-125			

**Matrix Spike Dup (2D26003-MSD1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:31

**Source: C204219-03**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.76		0.200	ug/L	5.00	0.170 U	75	75-125	2	25	

**Post Spike (2D26003-PS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:34

**Source: C204219-03**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.55		0.200	ug/L	5.00	0.0170	71	75-125			QM-08

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20003 - EPA 3005A

**Blank (2D20003-BLK1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 10:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Iron	22.0	U	50.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Manganese	1.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

**LCS (2D20003-BS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	203		10.0	ug/L	200		101	80-120			
Barium	207		10.0	ug/L	200		103	80-120			
Beryllium	20.5		1.00	ug/L	20.0		102	80-120			
Cadmium	21.0		1.00	ug/L	20.0		105	80-120			
Chromium	205		10.0	ug/L	200		103	80-120			
Cobalt	213		10.0	ug/L	200		106	80-120			
Copper	203		10.0	ug/L	200		101	80-120			
Iron	1040		50.0	ug/L	1000		104	80-120			

### QUALITY CONTROL

**Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**
*Batch 2D20003 - EPA 3005A*
**LCS (2D20003-BS1) Continued**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Lead	208		10.0	ug/L	200		104	80-120			
Manganese	204		10.0	ug/L	200		102	80-120			
Nickel	207		10.0	ug/L	200		104	80-120			
Silver	210		10.0	ug/L	200		105	80-120			
Vanadium	207		10.0	ug/L	200		104	80-120			
Zinc	203		10.0	ug/L	200		102	80-120			

**Matrix Spike (2D20003-MS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:07

*Source: C203833-01*

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	2.80 U	103	75-125			
Barium	281		10.0	ug/L	200	64.6	108	75-125			
Beryllium	20.8		1.00	ug/L	20.0	0.100 U	104	75-125			
Cadmium	21.9		1.00	ug/L	20.0	0.360 U	109	75-125			
Chromium	210		10.0	ug/L	200	2.93	104	75-125			
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125			
Copper	204		10.0	ug/L	200	1.60 U	102	75-125			
Iron	1440		50.0	ug/L	1000	323	112	75-125			
Lead	210		10.0	ug/L	200	1.90 U	105	75-125			
Manganese	212		10.0	ug/L	200	6.62	103	75-125			
Nickel	217		10.0	ug/L	200	1.80 U	108	75-125			
Silver	210		10.0	ug/L	200	1.90 U	105	75-125			
Vanadium	210		10.0	ug/L	200	1.40 U	105	75-125			
Zinc	215		10.0	ug/L	200	3.80 U	108	75-125			

**Matrix Spike Dup (2D20003-MSD1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:09

*Source: C203833-01*

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	2.80 U	103	75-125	0.007	20	
Barium	267		10.0	ug/L	200	64.6	101	75-125	5	20	
Beryllium	20.5		1.00	ug/L	20.0	0.100 U	103	75-125	1	20	
Cadmium	20.9		1.00	ug/L	20.0	0.360 U	104	75-125	5	20	
Chromium	208		10.0	ug/L	200	2.93	102	75-125	1	20	
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125	0.06	20	
Copper	203		10.0	ug/L	200	1.60 U	101	75-125	0.8	20	
Iron	1360		50.0	ug/L	1000	323	103	75-125	6	20	
Lead	208		10.0	ug/L	200	1.90 U	104	75-125	1	20	
Manganese	210		10.0	ug/L	200	6.62	102	75-125	0.9	20	
Nickel	207		10.0	ug/L	200	1.80 U	103	75-125	5	20	
Silver	207		10.0	ug/L	200	1.90 U	104	75-125	1	20	
Vanadium	208		10.0	ug/L	200	1.40 U	104	75-125	1	20	
Zinc	205		10.0	ug/L	200	3.80 U	102	75-125	5	20	

**Post Spike (2D20003-PS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:11

*Source: C203833-01*

### QUALITY CONTROL

**Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**
*Batch 2D20003 - EPA 3005A*
**Post Spike (2D20003-PS1) Continued**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:11

**Source: C203833-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.200		0.0100	mg/L	0.200	-0.00179	101	80-120			
Barium	0.260		0.0100	mg/L	0.200	0.0646	98	80-120			
Beryllium	0.0201		0.00100	mg/L	0.0200	6.08E-5	100	80-120			
Cadmium	0.0202		0.00100	mg/L	0.0200	-4.70E-5	101	80-120			
Chromium	0.203		0.0100	mg/L	0.200	0.00293	100	80-120			
Cobalt	0.207		0.0100	mg/L	0.200	0.000417	104	80-120			
Copper	0.198		0.0100	mg/L	0.200	0.00158	98	80-120			
Iron	1.31		0.0500	mg/L	1.00	0.323	99	80-120			
Lead	0.201		0.0100	mg/L	0.200	-0.00182	101	80-120			
Manganese	0.204		0.0100	mg/L	0.200	0.00662	99	80-120			
Nickel	0.201		0.0100	mg/L	0.200	0.00133	100	80-120			
Silver	0.211		0.0100	mg/L	0.200	5.44E-5	105	80-120			
Vanadium	0.203		0.0100	mg/L	0.200	0.00113	101	80-120			
Zinc	0.201		0.0100	mg/L	0.200	0.00245	99	80-120			

*Batch 2D20005 - EPA 3005A*
**Blank (2D20005-BLK1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

**LCS (2D20005-BS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	196		2.00	ug/L	200		98	80-120			
Selenium	210		1.00	ug/L	200		105	80-120			
Thallium	197		1.00	ug/L	200		99	80-120			

**Matrix Spike (2D20005-MS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:58

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202		2.00	ug/L	200	0.640	101	75-125			
Selenium	208		1.00	ug/L	200	0.830 U	104	75-125			
Thallium	195		1.00	ug/L	200	0.110 U	98	75-125			

**Matrix Spike Dup (2D20005-MSD1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:11

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	0.640	102	75-125	2	20	
Selenium	209		1.00	ug/L	200	0.830 U	105	75-125	0.7	20	
Thallium	195		1.00	ug/L	200	0.110 U	97	75-125	0.3	20	

## QUALITY CONTROL

### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20005 - EPA 3005A

**Post Spike (2D20005-PS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:15

Source: C203833-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200	0.640	103	80-120			
Selenium	211		1.00	ug/L	200	0.0955	106	80-120			
Thallium	197		1.00	ug/L	200	0.101	98	80-120			

### **Classical Chemistry Parameters - Quality Control**

Batch 2D24012 - NO PREP

**Blank (2D24012-BLK1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	12	U	15	mg/L							

**LCS (2D24012-BS1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	98		15	mg/L	100		98	80-120			

**Matrix Spike (2D24012-MS1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:56

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	34		15	mg/L	37.8	-2.7	98	80-120			

**Matrix Spike Dup (2D24012-MSD1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:57

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	36		15	mg/L	37.8	-2.7	103	80-120	6	25	

Batch 2D24016 - NO PREP

**Blank (2D24016-BLK1)**

Prepared: 04/24/2012 16:29 Analyzed: 05/02/2012 16:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10	U	10	mg/L							

**LCS (2D24016-BS1)**

Prepared: 04/24/2012 16:29 Analyzed: 05/02/2012 16:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	990		10	mg/L	1000		99	90-110			

**Duplicate (2D24016-DUP1)**

Prepared: 04/24/2012 16:29 Analyzed: 05/02/2012 16:29

Source: C203833-01

## QUALITY CONTROL

### **Classical Chemistry Parameters - Quality Control**

Batch 2D24016 - NO PREP

#### Duplicate (2D24016-DUP1) Continued

Prepared: 04/24/2012 16:29 Analyzed: 05/02/2012 16:29

Source: C203833-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	88		10	mg/L		100			13	10	QM-12

Batch 2D25008 - NO PREP

#### Blank (2D25008-BLK1)

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 20:55

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	0.43	U	5.0	mg/L							
Sulfate as SO <sub>4</sub>	1.7	J	5.0	mg/L							

#### LCS (2D25008-BS1)

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 21:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	50		5.0	mg/L	50.0		100	90-110			
Sulfate as SO <sub>4</sub>	50	B	5.0	mg/L	50.0		99	90-110			

#### Matrix Spike (2D25008-MS1)

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 22:01

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	24		5.0	mg/L	20.0	4.3	98	90-110			
Sulfate as SO <sub>4</sub>	27	B	5.0	mg/L	20.0	7.2	98	90-110			

#### Matrix Spike Dup (2D25008-MSD1)

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 22:18

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	23		5.0	mg/L	20.0	4.3	95	90-110	2	10	
Sulfate as SO <sub>4</sub>	26	B	5.0	mg/L	20.0	7.2	95	90-110	2	10	

**FLAGS/NOTES AND DEFINITIONS**

- B The analyte was detected in the associated method blank.
- D The sample was analyzed at dilution.
- J The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
- U The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
- MRL Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
- J-01 Result is estimated due to positive results in the associated method blank.
- QB-01 The method blank had a positive result for the analyte; however, the concentration in the method blank is less than 10% of the sample result, which minimizes the impact of the deviation.
- QM-08 Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
- QM-12 Precision between duplicate samples was outside acceptance limits.


**ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD**

4810 Executive Park Court, Suite 111  
 Jacksonville, FL 32216-6069  
 (904) 296-3007 Fax (904) 296-6210  
 10775 Central Port Dr.  
 Orlando, FL 32824  
 (407) 826-5314 Fax (407) 850-6945

**S&ME, Inc. (SM002)**

4810 Executive Park Court, Suite 111  
 Jacksonville, FL 32216-6069  
 (904) 296-3007 Fax (904) 296-6210  
 10775 Central Port Dr.  
 Orlando, FL 32824  
 (407) 826-5314 Fax (407) 850-6945

102-A Woodlawn Industrial Ct.

Cary, NC 27511

(919) 467-3090 Fax (919) 467-3515

Page 1 of 1

Requested Turnaround

Times

Note: Rush requests subject to  
 acceptance by the facility

Standard

Expedited

Due / /

Lab Worker/

**C203833**

Project Number

**1356-07-004**

Project Name/Desc

**Lincoln County LF - C&D**

PO # / Billing Info

**56553**

Reporting Contact

**Courtney Witters Murphy**

Billing Contact

**Barbara Ellington**

Site Location / Time Zone

**Charlotte, NC**

City/ST/Zip

**9751 Southern Pine Blvd.**

City/ST/Zip

**Charlotte, NC 28273**

Tel

**(704) 523-4726**

Fax

**(704) 525-3953**

Sampler(s) Name, Affiliation (Print)

**Courtney Murphy**

Sampler(s) Signature

**Courtney Murphy**

Requested Analyses

**8260B Appendix 1, 8260B Extended**

**SB,Se,Tl,V,Zn**

**AG,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Mn,Ni,Pb,**

**SM2540C**

**Alkalinity 310.2, Chloride 300,TDS**

**Hg**

**Surface 300**

**Preservation (See Codes) (Combine as necessary)**

**Sample Comments**

Collection Date

**4-18-12**

Collection Time

**1420**

Comp / Grab

**G**

Matrix

**GW**

Total # of Containers

**5**

Matrix

**WA**

Total # of Containers

**2**

Matrix

**WA**

Total # of Containers

**2**

Matrix

**WA**

Total # of Containers

**1**

Matrix

**WA**

</

**Environmental Conservation Laboratories, Inc.**

102-A Woodwinds Industrial Court

Cary NC, 27511

Phone: 919.467.3090 FAX: 919.467.3515



[www.encolabs.com](http://www.encolabs.com)

Monday, April 30, 2012

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

**RE: Laboratory Results for**

**Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - Surface Waters**

**ENCO Workorder(s): C203835**

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, April 19, 2012.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chuck Smith".

Chuck Smith

Project Manager

Enclosure(s)



www.encolabs.com

**SAMPLE SUMMARY/LABORATORY CHRONICLE**

Client ID:	5503-SW1	Lab ID:	C203835-01	Sampled:	04/17/12 16:35	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/20/12	08:56	4/24/2012	11:36
EPA 6020A		10/14/12		04/20/12	09:02	4/24/2012	13:07
EPA 7470A		05/15/12		04/26/12	08:19	4/26/2012	16:00
EPA 8260B		05/01/12		04/25/12	09:54	4/26/2012	02:53

Client ID:	5503-SW2	Lab ID:	C203835-02	Sampled:	04/17/12 16:25	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/20/12	08:56	4/24/2012	11:39
EPA 6020A		10/14/12		04/20/12	09:02	4/24/2012	13:11
EPA 7470A		05/15/12		04/26/12	08:19	4/26/2012	16:03
EPA 8260B		05/01/12		04/25/12	09:54	4/26/2012	03:23

Client ID:	5503-SW3	Lab ID:	C203835-03	Sampled:	04/17/12 16:15	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/20/12	08:56	4/24/2012	11:41
EPA 6020A		10/14/12		04/20/12	09:02	4/24/2012	13:14
EPA 7470A		05/15/12		04/26/12	08:19	4/26/2012	16:05
EPA 8260B		05/01/12		04/25/12	09:54	4/26/2012	03:52

Client ID:	5503-SW4	Lab ID:	C203835-04	Sampled:	04/17/12 15:50	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/20/12	08:56	4/24/2012	11:43
EPA 6020A		10/14/12		04/20/12	09:02	4/24/2012	13:18
EPA 7470A		05/15/12		04/27/12	08:37	4/27/2012	14:36
EPA 8260B		05/01/12		04/25/12	09:54	4/26/2012	04:21

Client ID:	5503-SW5	Lab ID:	C203835-05	Sampled:	04/17/12 15:30	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 6010C		10/14/12		04/20/12	08:56	4/24/2012	11:45
EPA 6020A		10/14/12		04/20/12	09:02	4/24/2012	13:22
EPA 7470A		05/15/12		04/26/12	08:19	4/26/2012	16:07
EPA 8260B		05/01/12		04/25/12	09:54	4/26/2012	04:51

Client ID:	5503-TripBlank	Lab ID:	C203835-06	Sampled:	04/17/12 15:30	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 8260B		05/01/12		04/25/12	09:54	4/26/2012	05:20

**NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY**

<b>Client ID:</b> 5503-SW1		<b>Lab ID:</b> C203835-01								
<b>Analyte</b>		<b>Results</b>	<b>Flag</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Units</b>	<b>Method</b>	<b>Notes</b>
Barium - Total		29.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total		1.05	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total		1.95	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total		1.88	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total		2970		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		142		1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total		3.05	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total		2.17	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total		22.5		1	3.80	10.0	10	ug/L	EPA 6010C	

  

<b>Client ID:</b> 5503-SW2		<b>Lab ID:</b> C203835-02								
<b>Analyte</b>		<b>Results</b>	<b>Flag</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Units</b>	<b>Method</b>	<b>Notes</b>
Barium - Total		21.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Iron - Total		456		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		42.7	J	1	1.10	10.0	50	ug/L	EPA 6010C	

  

<b>Client ID:</b> 5503-SW3		<b>Lab ID:</b> C203835-03								
<b>Analyte</b>		<b>Results</b>	<b>Flag</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Units</b>	<b>Method</b>	<b>Notes</b>
Barium - Total		39.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.100	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total		6.33	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total		1.52	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total		2.01	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total		1690		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		30.6	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Vanadium - Total		8.90	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total		4.68	J	1	3.80	10.0	10	ug/L	EPA 6010C	

  

<b>Client ID:</b> 5503-SW4		<b>Lab ID:</b> C203835-04								
<b>Analyte</b>		<b>Results</b>	<b>Flag</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Units</b>	<b>Method</b>	<b>Notes</b>
Barium - Total		23.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Iron - Total		604		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		27.6	J	1	1.10	10.0	50	ug/L	EPA 6010C	

  

<b>Client ID:</b> 5503-SW5		<b>Lab ID:</b> C203835-05								
<b>Analyte</b>		<b>Results</b>	<b>Flag</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Units</b>	<b>Method</b>	<b>Notes</b>
Barium - Total		71.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total		0.147	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total		4.43	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total		17.4		1	1.10	10.0	10	ug/L	EPA 6010C	
Iron - Total		30200		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total		847		1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total		3.47	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total		6.04	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total		4.03	J	1	3.80	10.0	10	ug/L	EPA 6010C	

### ANALYTICAL RESULTS

**Description:** 5503-SW1

**Lab Sample ID:** C203835-01

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:35

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

#### **Volatile Organic Compounds by GCMS**

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 02:53	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 02:53	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 02:53	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 02:53	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 02:53	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 02:53	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 02:53	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 02:53	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 02:53	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 02:53	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 02:53	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 02:53	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 02:53	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 02:53	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 02:53	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 02:53	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 02:53	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 02:53	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 02:53	JKG	

**Description:** 5503-SW1

**Lab Sample ID:** C203835-01

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:35

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 02:53	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 02:53	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 02:53	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	109 %	51-122		2D25014	EPA 8260B	04/26/12 02:53	JKG	
Dibromofluoromethane	50	1	50.0	100 %	68-117		2D25014	EPA 8260B	04/26/12 02:53	JKG	
Toluene-d8	49	1	50.0	98 %	67-127		2D25014	EPA 8260B	04/26/12 02:53	JKG	

**Description:** 5503-SW1**Lab Sample ID:** C203835-01**Received:** 04/19/12 09:45**Matrix:** Surface Water**Sampled:** 04/17/12 16:35**Work Order:** C203835**Project:** Lincoln County LF - Surface Waters**Sampled By:** Brian E. Wilson**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 16:00	KER	

**Description:** 5503-SW1

**Lab Sample ID:** C203835-01

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:35

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 13:07	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:36	JDH	
<b>Barium [7440-39-3] ^</b>	<b>29.9</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:36	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:36	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>1.05</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
<b>Cobalt [7440-48-4] ^</b>	<b>1.95</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
<b>Copper [7440-50-8] ^</b>	<b>1.88</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
<b>Iron [7439-89-6] ^</b>	<b>2970</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:36	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>142</b>		<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
<b>Nickel [7440-02-0] ^</b>	<b>3.05</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 13:07	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:36	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 13:07	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>2.17</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	
<b>Zinc [7440-66-6] ^</b>	<b>22.5</b>		<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:36</b>	<b>JDH</b>	

**Description:** 5503-SW2

**Lab Sample ID:** C203835-02

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:25

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 03:23	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 03:23	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 03:23	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 03:23	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 03:23	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 03:23	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 03:23	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 03:23	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 03:23	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 03:23	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 03:23	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 03:23	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 03:23	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 03:23	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 03:23	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 03:23	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 03:23	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 03:23	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 03:23	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 03:23	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 03:23	JKG	

**Description:** 5503-SW2

**Lab Sample ID:** C203835-02

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:25

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 03:23	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	54	1	50.0	108 %	51-122	2D25014	EPA 8260B	04/26/12 03:23	JKG		
Dibromofluoromethane	45	1	50.0	90 %	68-117	2D25014	EPA 8260B	04/26/12 03:23	JKG		
Toluene-d8	50	1	50.0	100 %	67-127	2D25014	EPA 8260B	04/26/12 03:23	JKG		

**Description:** 5503-SW2**Lab Sample ID:** C203835-02**Received:** 04/19/12 09:45**Matrix:** Surface Water**Sampled:** 04/17/12 16:25**Work Order:** C203835**Project:** Lincoln County LF - Surface Waters**Sampled By:** Brian E. Wilson**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 16:03	KER	

**Description:** 5503-SW2

**Lab Sample ID:** C203835-02

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:25

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 13:11	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:39	JDH	
<b>Barium [7440-39-3] ^</b>	<b>21.0</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:39</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:39	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:39	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:39	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:39	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:39	JDH	
<b>Iron [7439-89-6] ^</b>	<b>456</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:39</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:39	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>42.7</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:39</b>	<b>JDH</b>	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:39	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 13:11	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:39	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 13:11	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:39	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:39	JDH	

**Description:** 5503-SW3

**Lab Sample ID:** C203835-03

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:15

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 03:52	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 03:52	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 03:52	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 03:52	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 03:52	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 03:52	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 03:52	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 03:52	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 03:52	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 03:52	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 03:52	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 03:52	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 03:52	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 03:52	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 03:52	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 03:52	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 03:52	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 03:52	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 03:52	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 03:52	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 03:52	JKG	

**Description:** 5503-SW3

**Lab Sample ID:** C203835-03

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:15

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 03:52	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	108 %	51-122		2D25014	EPA 8260B	04/26/12 03:52	JKG	
Dibromofluoromethane	50	1	50.0	101 %	68-117		2D25014	EPA 8260B	04/26/12 03:52	JKG	
Toluene-d8	49	1	50.0	98 %	67-127		2D25014	EPA 8260B	04/26/12 03:52	JKG	

**Description:** 5503-SW3**Lab Sample ID:** C203835-03**Received:** 04/19/12 09:45**Matrix:** Surface Water**Sampled:** 04/17/12 16:15**Work Order:** C203835**Project:** Lincoln County LF - Surface Waters**Sampled By:** Brian E. Wilson**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 16:05	KER	

**Description:** 5503-SW3

**Lab Sample ID:** C203835-03

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 16:15

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 13:14	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:41	JDH	
<b>Barium [7440-39-3] ^</b>	<b>39.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.100</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:41	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>6.33</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
<b>Cobalt [7440-48-4] ^</b>	<b>1.52</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
<b>Copper [7440-50-8] ^</b>	<b>2.01</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.60</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
<b>Iron [7439-89-6] ^</b>	<b>1690</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:41	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>30.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:41	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 13:14	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:41	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 13:14	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>8.90</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	
<b>Zinc [7440-66-6] ^</b>	<b>4.68</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:41</b>	<b>JDH</b>	

**Description:** 5503-SW4

**Lab Sample ID:** C203835-04

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 15:50

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 04:21	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 04:21	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 04:21	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 04:21	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 04:21	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 04:21	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 04:21	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 04:21	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 04:21	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 04:21	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 04:21	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 04:21	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 04:21	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 04:21	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 04:21	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 04:21	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 04:21	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 04:21	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 04:21	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 04:21	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 04:21	JKG	

**Description:** 5503-SW4

**Lab Sample ID:** C203835-04

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 15:50

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 04:21	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	56	1	50.0	112 %	51-122		2D25014	EPA 8260B	04/26/12 04:21	JKG	
Dibromofluoromethane	50	1	50.0	100 %	68-117		2D25014	EPA 8260B	04/26/12 04:21	JKG	
Toluene-d8	49	1	50.0	98 %	67-127		2D25014	EPA 8260B	04/26/12 04:21	JKG	

**Description:** 5503-SW4**Lab Sample ID:** C203835-04**Received:** 04/19/12 09:45**Matrix:** Surface Water**Sampled:** 04/17/12 15:50**Work Order:** C203835**Project:** Lincoln County LF - Surface Waters**Sampled By:** Brian E. Wilson**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/27/12 14:36	KER	

**Description:** 5503-SW4

**Lab Sample ID:** C203835-04

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 15:50

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 13:18	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:43	JDH	
<b>Barium [7440-39-3] ^</b>	<b>23.8</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:43</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:43	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:43	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:43	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:43	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:43	JDH	
<b>Iron [7439-89-6] ^</b>	<b>604</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:43</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:43	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>27.6</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:43</b>	<b>JDH</b>	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:43	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 13:18	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:43	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 13:18	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:43	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:43	JDH	

**Description:** 5503-SW5

**Lab Sample ID:** C203835-05

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 15:30

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 04:51	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 04:51	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 04:51	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 04:51	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 04:51	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 04:51	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 04:51	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 04:51	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 04:51	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 04:51	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 04:51	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 04:51	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 04:51	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 04:51	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 04:51	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 04:51	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 04:51	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 04:51	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 04:51	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 04:51	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 04:51	JKG	

**Description:** 5503-SW5

**Lab Sample ID:** C203835-05

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 15:30

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 04:51	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	55	1	50.0	110 %	51-122	2D25014	EPA 8260B	04/26/12 04:51	JKG		
Dibromofluoromethane	50	1	50.0	100 %	68-117	2D25014	EPA 8260B	04/26/12 04:51	JKG		
Toluene-d8	48	1	50.0	96 %	67-127	2D25014	EPA 8260B	04/26/12 04:51	JKG		

**Description:** 5503-SW5**Lab Sample ID:** C203835-05**Received:** 04/19/12 09:45**Matrix:** Surface Water**Sampled:** 04/17/12 15:30**Work Order:** C203835**Project:** Lincoln County LF - Surface Waters**Sampled By:** Brian E. Wilson**Metals by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	04/26/12 16:07	KER	

**Description:** 5503-SW5

**Lab Sample ID:** C203835-05

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/17/12 15:30

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** Brian E. Wilson

**Metals (total recoverable) by EPA 6000/7000 Series Methods**
<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	04/24/12 13:22	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:45	JDH	
<b>Barium [7440-39-3] ^</b>	<b>71.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
<b>Beryllium [7440-41-7] ^</b>	<b>0.147</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.100</b>	<b>1.00</b>	<b>1</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:45	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>4.43</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
<b>Cobalt [7440-48-4] ^</b>	<b>17.4</b>		<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:45	JDH	
<b>Iron [7439-89-6] ^</b>	<b>30200</b>		<b>ug/L</b>	<b>1</b>	<b>22.0</b>	<b>50.0</b>	<b>300</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:45	JDH	
<b>Manganese [7439-96-5] ^</b>	<b>847</b>		<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
<b>Nickel [7440-02-0] ^</b>	<b>3.47</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	04/24/12 13:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:45	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	04/24/12 13:22	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>6.04</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	
<b>Zinc [7440-66-6] ^</b>	<b>4.03</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>3.80</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:45</b>	<b>JDH</b>	

**Description:** 5503-TripBlank

**Lab Sample ID:** C203835-06

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/17/12 15:30

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/26/12 05:20	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/26/12 05:20	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/26/12 05:20	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/26/12 05:20	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/26/12 05:20	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/26/12 05:20	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/26/12 05:20	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/26/12 05:20	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/26/12 05:20	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/26/12 05:20	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/26/12 05:20	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 05:20	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/26/12 05:20	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/26/12 05:20	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/26/12 05:20	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/26/12 05:20	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/26/12 05:20	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/26/12 05:20	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/26/12 05:20	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/26/12 05:20	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/26/12 05:20	JKG	

**Description:** 5503-TripBlank

**Lab Sample ID:** C203835-06

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/17/12 15:30

**Work Order:** C203835

**Project:** Lincoln County LF - Surface Waters

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/26/12 05:20	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	55	1	50.0	109 %	51-122		2D25014	EPA 8260B	04/26/12 05:20	JKG	
Dibromofluoromethane	50	1	50.0	99 %	68-117		2D25014	EPA 8260B	04/26/12 05:20	JKG	
Toluene-d8	48	1	50.0	96 %	67-127		2D25014	EPA 8260B	04/26/12 05:20	JKG	

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D25014 - EPA 5030B\_MS

##### Blank (2D25014-BLK1)

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 22:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							

Surrogate: 4-Bromofluorobenzene

55

ug/L

50.0

110

51-122

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D25014 - EPA 5030B\_MS

##### **Blank (2D25014-BLK1) Continued**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 22:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	50			ug/L	50.0		100	68-117			
Surrogate: Toluene-d8	50			ug/L	50.0		100	67-127			

##### **LCS (2D25014-BS1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 22:58

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		91	75-133			
Benzene	18		1.0	ug/L	20.0		88	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		99	83-117			
Toluene	18		1.0	ug/L	20.0		91	71-118			
Trichloroethene	19		1.0	ug/L	20.0		96	82-118			

##### **Matrix Spike (2D25014-MS1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 23:27

Source: C204638-16

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	90	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	89	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	98	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	89	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	96	82-118			

##### **Matrix Spike Dup (2D25014-MSD1)**

Prepared: 04/25/2012 09:54 Analyzed: 04/25/2012 23:57

Source: C204638-16

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.21 U	85	75-133	5	20	
Benzene	17		1.0	ug/L	20.0	0.15 U	85	81-134	5	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117	5	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118	3	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	94	82-118	2	15	

#### **Metals by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D26003 - EPA 7470A

##### **Blank (2D26003-BLK1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.170	U	0.200	ug/L							

##### **LCS (2D26003-BS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.89		0.200	ug/L	5.00		98	80-120			

##### **Matrix Spike (2D26003-MS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:29

### QUALITY CONTROL

**Metals by EPA 6000/7000 Series Methods - Quality Control**
*Batch 2D26003 - EPA 7470A*
**Matrix Spike (2D26003-MS1) Continued**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:29

**Source: C204219-03**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.82		0.200	ug/L	5.00	0.170 U	76	75-125			

**Matrix Spike Dup (2D26003-MSD1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:31

**Source: C204219-03**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.76		0.200	ug/L	5.00	0.170 U	75	75-125	2	25	

**Post Spike (2D26003-PS1)**

Prepared: 04/26/2012 08:19 Analyzed: 04/26/2012 15:34

**Source: C204219-03**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.55		0.200	ug/L	5.00	0.0170	71	75-125			

*Batch 2D27007 - EPA 7470A*
**Blank (2D27007-BLK1)**

Prepared: 04/27/2012 08:37 Analyzed: 04/27/2012 14:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.170	U	0.200	ug/L							

**LCS (2D27007-BS1)**

Prepared: 04/27/2012 08:37 Analyzed: 04/27/2012 14:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.95		0.200	ug/L	5.00		99	80-120			

**Matrix Spike (2D27007-MS1)**

Prepared: 04/27/2012 08:37 Analyzed: 04/27/2012 14:25

**Source: C203991-05**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.37		0.200	ug/L	5.00	0.538	77	75-125			

**Matrix Spike Dup (2D27007-MSD1)**

Prepared: 04/27/2012 08:37 Analyzed: 04/27/2012 14:27

**Source: C203991-05**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.47		0.200	ug/L	5.00	0.538	79	75-125	2	25	

**Post Spike (2D27007-PS1)**

Prepared: 04/27/2012 08:37 Analyzed: 04/27/2012 14:29

**Source: C203991-05**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.11		0.200	ug/L	5.00	0.538	71	75-125			

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20003 - EPA 3005A

##### **Blank (2D20003-BLK1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 10:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Iron	22.0	U	50.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Manganese	1.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

##### **LCS (2D20003-BS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	203		10.0	ug/L	200		101	80-120			
Barium	207		10.0	ug/L	200		103	80-120			
Beryllium	20.5		1.00	ug/L	20.0		102	80-120			
Cadmium	21.0		1.00	ug/L	20.0		105	80-120			
Chromium	205		10.0	ug/L	200		103	80-120			
Cobalt	213		10.0	ug/L	200		106	80-120			
Copper	203		10.0	ug/L	200		101	80-120			
Iron	1040		50.0	ug/L	1000		104	80-120			
Lead	208		10.0	ug/L	200		104	80-120			
Manganese	204		10.0	ug/L	200		102	80-120			
Nickel	207		10.0	ug/L	200		104	80-120			
Silver	210		10.0	ug/L	200		105	80-120			
Vanadium	207		10.0	ug/L	200		104	80-120			
Zinc	203		10.0	ug/L	200		102	80-120			

##### **Matrix Spike (2D20003-MS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:07

Source: C203833-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	2.80 U	103	75-125			
Barium	281		10.0	ug/L	200	64.6	108	75-125			
Beryllium	20.8		1.00	ug/L	20.0	0.100 U	104	75-125			
Cadmium	21.9		1.00	ug/L	20.0	0.360 U	109	75-125			
Chromium	210		10.0	ug/L	200	2.93	104	75-125			
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125			
Copper	204		10.0	ug/L	200	1.60 U	102	75-125			
Iron	1440		50.0	ug/L	1000	323	112	75-125			
Lead	210		10.0	ug/L	200	1.90 U	105	75-125			
Manganese	212		10.0	ug/L	200	6.62	103	75-125			
Nickel	217		10.0	ug/L	200	1.80 U	108	75-125			

### QUALITY CONTROL

**Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**
*Batch 2D20003 - EPA 3005A*
**Matrix Spike (2D20003-MS1) Continued**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:07

**Source: C203833-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	210		10.0	ug/L	200	1.90 U	105	75-125			
Vanadium	210		10.0	ug/L	200	1.40 U	105	75-125			
Zinc	215		10.0	ug/L	200	3.80 U	108	75-125			

**Matrix Spike Dup (2D20003-MSD1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:09

**Source: C203833-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	2.80 U	103	75-125	0.007	20	
Barium	267		10.0	ug/L	200	64.6	101	75-125	5	20	
Beryllium	20.5		1.00	ug/L	20.0	0.100 U	103	75-125	1	20	
Cadmium	20.9		1.00	ug/L	20.0	0.360 U	104	75-125	5	20	
Chromium	208		10.0	ug/L	200	2.93	102	75-125	1	20	
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125	0.06	20	
Copper	203		10.0	ug/L	200	1.60 U	101	75-125	0.8	20	
Iron	1360		50.0	ug/L	1000	323	103	75-125	6	20	
Lead	208		10.0	ug/L	200	1.90 U	104	75-125	1	20	
Manganese	210		10.0	ug/L	200	6.62	102	75-125	0.9	20	
Nickel	207		10.0	ug/L	200	1.80 U	103	75-125	5	20	
Silver	207		10.0	ug/L	200	1.90 U	104	75-125	1	20	
Vanadium	208		10.0	ug/L	200	1.40 U	104	75-125	1	20	
Zinc	205		10.0	ug/L	200	3.80 U	102	75-125	5	20	

**Post Spike (2D20003-PS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:11

**Source: C203833-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.200		0.0100	mg/L	0.200	-0.00179	101	80-120			
Barium	0.260		0.0100	mg/L	0.200	0.0646	98	80-120			
Beryllium	0.0201		0.00100	mg/L	0.0200	6.08E-5	100	80-120			
Cadmium	0.0202		0.00100	mg/L	0.0200	-4.70E-5	101	80-120			
Chromium	0.203		0.0100	mg/L	0.200	0.00293	100	80-120			
Cobalt	0.207		0.0100	mg/L	0.200	0.000417	104	80-120			
Copper	0.198		0.0100	mg/L	0.200	0.00158	98	80-120			
Iron	1.31		0.0500	mg/L	1.00	0.323	99	80-120			
Lead	0.201		0.0100	mg/L	0.200	-0.00182	101	80-120			
Manganese	0.204		0.0100	mg/L	0.200	0.00662	99	80-120			
Nickel	0.201		0.0100	mg/L	0.200	0.00133	100	80-120			
Silver	0.211		0.0100	mg/L	0.200	5.44E-5	105	80-120			
Vanadium	0.203		0.0100	mg/L	0.200	0.00113	101	80-120			
Zinc	0.201		0.0100	mg/L	0.200	0.00245	99	80-120			

*Batch 2D20005 - EPA 3005A*
**Blank (2D20005-BLK1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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### QUALITY CONTROL

**Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**


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Batch 2D20005 - EPA 3005A

**Blank (2D20005-BLK1) Continued**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

**LCS (2D20005-BS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	196		2.00	ug/L	200		98	80-120			
Selenium	210		1.00	ug/L	200		105	80-120			
Thallium	197		1.00	ug/L	200		99	80-120			

**Matrix Spike (2D20005-MS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:58

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202		2.00	ug/L	200	0.640	101	75-125			
Selenium	208		1.00	ug/L	200	0.830 U	104	75-125			
Thallium	195		1.00	ug/L	200	0.110 U	98	75-125			

**Matrix Spike Dup (2D20005-MSD1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:11

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	0.640	102	75-125	2	20	
Selenium	209		1.00	ug/L	200	0.830 U	105	75-125	0.7	20	
Thallium	195		1.00	ug/L	200	0.110 U	97	75-125	0.3	20	

**Post Spike (2D20005-PS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:15

**Source: C203833-02**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200	0.640	103	80-120			
Selenium	211		1.00	ug/L	200	0.0955	106	80-120			
Thallium	197		1.00	ug/L	200	0.101	98	80-120			

**FLAGS/NOTES AND DEFINITIONS**

- B      The analyte was detected in the associated method blank.
- D      The sample was analyzed at dilution.
- J      The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
- U      The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
- E      The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
- MRL     Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.



## ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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102-A Woodwinds Industrial Ct.  
Cary, NC 27511  
(919) 467-3040 Fax (919) 467-3515

Client Name <b>S&amp;ME, Inc. (SM002)</b>	Project Number <b>1356-07-004</b>	Requested Analyses										
Address <b>9751 Southern Pine Blvd.</b>	Project Name/Desc <b>Lincoln County LF - Surface Waters</b>	Request Turnaround Times										
City/ST/Zip <b>Charlotte, NC 28273</b>	PO # / Billing Info <b>5553</b>	None. Rush requests subject to acceptance by the facility										
Tel <b>(704) 523-4726</b>	Fax <b>(704) 525-3953</b>	Reporting Contact <b>Courtney Murphy</b>	<input checked="" type="checkbox"/> Standard									
Sample(s) Name, Affiliation (Print) <i>Bianca Murphy</i>		Billing Contact <b>Barbara Ellington</b>	<input type="checkbox"/> Expedited									
Sampler(s) Signature <i>Bianca Murphy</i>		Site Location / Time Zone <b>Greene, NC</b>	Due <u>  </u> / <u>  </u> / <u>  </u>									
Lab Workorder <b>C203835</b>												
Preservation (See Codes) (Combine as necessary)												
Item #	Sample ID (Field Identification)	Collection Date <b>4/17/12</b>	Collection Time <b>1635</b>	Comp / Grab <b>5</b>	Matrix (see codes)	Total # of Containers	Sample Comments					
5503-SW1		4/17/12	1625	5	SW	4	<input checked="" type="checkbox"/>					
5503-SW2		4/17/12	1615	6	SW	4	<input checked="" type="checkbox"/>					
5503-SW3		4/17/12	1615	6	SW	4	<input checked="" type="checkbox"/>					
5503-SW4		4/17/12	1550	6	SW	4	<input checked="" type="checkbox"/>					
5503-SW5		4/17/12	1530	6	SW	4	<input checked="" type="checkbox"/>					
5503-TripBlank				WA	2	X						
<- Total # of Containers												
Sample Kit Prepared By <b>Bianca Murphy</b>	Date/Time <b>4/21/12</b>	Reinforced By <b>Courtney Murphy</b>	Date/Time <b>4/18/12 1700</b>	Received By <b>Mary Hall</b>	Date/Time <b>4/18/12 1700</b>	Received By <b>Mary Hall</b>						
Comments/Special Reporting Requirements <i>None</i>		Reinforced By <b>Courtney Murphy</b>	Date/Time <b>4/19/12 9:45</b>	Date/Time <b>4/19/12 9:45</b>								
Cooler #'s & Temps on Receipt <b>0-250 0A-102 23°</b>												
Condition Upon Receipt <b>✓ Acceptable</b>												
Unacceptable												

Matrix : GW-Groundwater SG-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: H-He H-HCl N-NH<sub>3</sub> S-H<sub>2</sub>SO<sub>4</sub> NO-NaOH O-Other (detail in comments)

Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist



www.encolabs.com

**Environmental Conservation Laboratories, Inc.**

102-A Woodwinds Industrial Court

Cary NC, 27511

Phone: 919.467.3090 FAX: 919.467.3515



[www.encolabs.com](http://www.encolabs.com)

Monday, April 30, 2012

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

**RE: Laboratory Results for**

**Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - Leachate**

**ENCO Workorder(s): C203834**

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, April 19, 2012.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chuck Smith".

Chuck Smith

Project Manager

Enclosure(s)

### **PROJECT NARRATIVE**

Client: S&ME, Inc. (SM002)  
Project: Lincoln County LF - Leachate

#### Overview

Environmental Conservation Laboratories, Inc. (ENCO) analyzed all submitted samples in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling by ENCO are discussed in the QC Remarks section below.

#### Quality Control Samples

No Comments

#### Quality Control Remarks

No Comments

#### Other Comments

Sample 5503-Lift Station was diluted 10X during the 8260B analysis due to the foaming nature of the sample matrix.

The analytical data presented in this report are consistent with the methods as referenced in the analytical report. Any exceptions or deviations are noted in the QC remarks section of this narrative or in the Flags/Notes and Definitions section of the report.

#### Released By:

Environmental Conservation Laboratories, Inc.

Chuck Smith  
Project Manager

**SAMPLE SUMMARY/LABORATORY CHRONICLE**

Client ID:	5503-Lift Station	Lab ID:	C203834-01	Sampled:	04/18/12 10:15	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/26/2012	00:30
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	11:06
EPA 353.2		04/20/12	10:15	04/19/12	14:32	4/19/2012	15:57
EPA 353.2		05/16/12		04/25/12	06:13	4/25/2012	08:58
EPA 353.2		01/12/15		04/29/12	16:46	4/29/2012	18:23
EPA 365.4		05/16/12		04/25/12	10:12	4/26/2012	11:32
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:32
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	12:59
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	22:00
SM 2540D		04/25/12		04/23/12	12:40	4/23/2012	12:40
SM 5210B		04/20/12	10:15	04/19/12	16:08	4/19/2012	16:08
SM 5220D		05/16/12		04/25/12	13:41	4/25/2012	18:36

Client ID:	5503-SW6	Lab ID:	C203834-02	Sampled:	04/18/12 10:00	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 300.0		05/16/12		04/25/12	08:17	4/26/2012	01:20
EPA 310.2		05/02/12		04/24/12	09:42	4/24/2012	11:07
EPA 353.2		04/20/12	10:00	04/19/12	14:32	4/19/2012	15:59
EPA 353.2		05/16/12		04/25/12	06:13	4/25/2012	09:01
EPA 353.2		01/12/15		04/29/12	16:46	4/29/2012	18:23
EPA 365.4		05/16/12		04/25/12	10:12	4/26/2012	11:34
EPA 6010C		10/15/12		04/20/12	08:56	4/24/2012	11:34
EPA 6020A		10/15/12		04/20/12	09:02	4/24/2012	13:03
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	22:29
SM 2540D		04/25/12		04/23/12	12:40	4/23/2012	12:40
SM 5210B		04/20/12	10:00	04/19/12	16:08	4/19/2012	16:08
SM 5220D		05/16/12		04/25/12	13:41	4/25/2012	18:36

Client ID:	5503-Trip Blank	Lab ID:	C203834-03	Sampled:	04/18/12 10:00	Received:	04/19/12 09:45
Parameter		Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 8260B		05/02/12		04/26/12	10:30	4/27/2012	22:59

**NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY**

Client ID: 5503-Lift Station		Lab ID: C203834-01							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	91.5		1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	603		1	1.00	10.0	100	ug/L	EPA 6010C	
Biochemical Oxygen Demand	32		1	2.0	2.0	NE	mg/L	SM 5210B	
Chemical Oxygen Demand	430		1	20	20	NE	mg/L	SM 5220D	
Chromium - Total	19.8		1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	9.96	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	36.6	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Nitrate as N	0.12	J	1	0.025	0.10	10000	mg/L	EPA 353.2	
Nitrate/Nitrite as N	0.21		1	0.025	0.10	NE	mg/L	EPA 353.2	
Nitrite as N	0.088	J	1	0.0030	0.10	1000	mg/L	EPA 353.2	
Phosphorus	1.2	D	5	0.12	0.50	NE	mg/L	EPA 365.4	
Sulfate as SO4	3.9	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Total Alkalinity as CaCO3	1600	D	10	120	150	NE	mg/L	EPA 310.2	
Total Suspended Solids	59		1	1.0	1.0	NE	mg/L	SM 2540D	
Vanadium - Total	6.93	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	107		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-SW6		Lab ID: C203834-02							
Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	44.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Biochemical Oxygen Demand	12		1	2.0	2.0	NE	mg/L	SM 5210B	
Chemical Oxygen Demand	46		1	10	10	NE	mg/L	SM 5220D	
Cobalt - Total	3.15	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.36	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Nitrate as N	0.032	J	1	0.025	0.10	10000	mg/L	EPA 353.2	
Nitrate/Nitrite as N	0.042	J	1	0.025	0.10	NE	mg/L	EPA 353.2	
Nitrite as N	0.0096	J	1	0.0030	0.10	1000	mg/L	EPA 353.2	
Phosphorus	0.15		1	0.024	0.10	NE	mg/L	EPA 365.4	
Sulfate as SO4	1.6	JB	1	0.04	5.0	250000	mg/L	EPA 300.0	J-01
Toluene	0.58	J	1	0.14	1.0	1	ug/L	EPA 8260B	
Total Alkalinity as CaCO3	15		1	12	15	NE	mg/L	EPA 310.2	
Total Suspended Solids	30		1	1.0	1.0	NE	mg/L	SM 2540D	
Vanadium - Total	1.96	J	1	1.40	10.0	25	ug/L	EPA 6010C	

### ANALYTICAL RESULTS

**Description:** 5503-Lift Station

**Lab Sample ID:** C203834-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 10:15

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

#### **Volatile Organic Compounds by GCMS**

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	1.7	UD	ug/L	10	1.7	10	5	EPA 8260B	04/27/12 22:00	JKG	
1,1,1-Trichloroethane [71-55-6] ^	1.2	UD	ug/L	10	1.2	10	1	EPA 8260B	04/27/12 22:00	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	2.8	UD	ug/L	10	2.8	10	3	EPA 8260B	04/27/12 22:00	JKG	
1,1,2-Trichloroethane [79-00-5] ^	1.4	UD	ug/L	10	1.4	10	1	EPA 8260B	04/27/12 22:00	JKG	
1,1-Dichloroethane [75-34-3] ^	1.3	UD	ug/L	10	1.3	10	5	EPA 8260B	04/27/12 22:00	JKG	
1,1-Dichloroethene [75-35-4] ^	2.1	UD	ug/L	10	2.1	10	5	EPA 8260B	04/27/12 22:00	JKG	
1,2,3-Trichloropropane [96-18-4] ^	2.3	UD	ug/L	10	2.3	10	1	EPA 8260B	04/27/12 22:00	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	4.8	UD	ug/L	10	4.8	10	13	EPA 8260B	04/27/12 22:00	JKG	
1,2-Dibromoethane [106-93-4] ^	6.6	UD	ug/L	10	6.6	10	1	EPA 8260B	04/27/12 22:00	JKG	
1,2-Dichlorobenzene [95-50-1] ^	1.9	UD	ug/L	10	1.9	10	5	EPA 8260B	04/27/12 22:00	JKG	
1,2-Dichloroethane [107-06-2] ^	2.1	UD	ug/L	10	2.1	10	1	EPA 8260B	04/27/12 22:00	JKG	
1,2-Dichloropropane [78-87-5] ^	1.0	UD	ug/L	10	1.0	10	1	EPA 8260B	04/27/12 22:00	JKG	
1,4-Dichlorobenzene [106-46-7] ^	1.9	UD	ug/L	10	1.9	10	1	EPA 8260B	04/27/12 22:00	JKG	
2-Butanone [78-93-3] ^	13	UD	ug/L	10	13	50	100	EPA 8260B	04/27/12 22:00	JKG	
2-Hexanone [591-78-6] ^	8.8	UD	ug/L	10	8.8	50	50	EPA 8260B	04/27/12 22:00	JKG	
4-Methyl-2-pentanone [108-10-1] ^	11	UD	ug/L	10	11	50	100	EPA 8260B	04/27/12 22:00	JKG	
Acetone [67-64-1] ^	12	UD	ug/L	10	12	50	100	EPA 8260B	04/27/12 22:00	JKG	
Acrylonitrile [107-13-1] ^	35	UD	ug/L	10	35	100	200	EPA 8260B	04/27/12 22:00	JKG	
Benzene [71-43-2] ^	1.5	UD	ug/L	10	1.5	10	1	EPA 8260B	04/27/12 22:00	JKG	
Bromochloromethane [74-97-5] ^	4.8	UD	ug/L	10	4.8	10	3	EPA 8260B	04/27/12 22:00	JKG	
Bromodichloromethane [75-27-4] ^	1.7	UD	ug/L	10	1.7	10	1	EPA 8260B	04/27/12 22:00	JKG	
Bromoform [75-25-2] ^	2.2	UD	ug/L	10	2.2	10	3	EPA 8260B	04/27/12 22:00	JKG	
Bromomethane [74-83-9] ^	1.4	UD	ug/L	10	1.4	10	10	EPA 8260B	04/27/12 22:00	JKG	
Carbon disulfide [75-15-0] ^	15	UD	ug/L	10	15	50	100	EPA 8260B	04/27/12 22:00	JKG	
Carbon tetrachloride [56-23-5] ^	1.7	UD	ug/L	10	1.7	10	1	EPA 8260B	04/27/12 22:00	JKG	
Chlorobenzene [108-90-7] ^	1.7	UD	ug/L	10	1.7	10	3	EPA 8260B	04/27/12 22:00	JKG	
Chloroethane [75-00-3] ^	2.3	UD	ug/L	10	2.3	10	10	EPA 8260B	04/27/12 22:00	JKG	
Chloroform [67-66-3] ^	1.8	UD	ug/L	10	1.8	10	5	EPA 8260B	04/27/12 22:00	JKG	
Chloromethane [74-87-3] ^	1.3	UD	ug/L	10	1.3	10	1	EPA 8260B	04/27/12 22:00	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	1.5	UD	ug/L	10	1.5	10	5	EPA 8260B	04/27/12 22:00	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	2.0	UD	ug/L	10	2.0	10	1	EPA 8260B	04/27/12 22:00	JKG	
Dibromochloromethane [124-48-1] ^	1.7	UD	ug/L	10	1.7	10	3	EPA 8260B	04/27/12 22:00	JKG	
Dibromomethane [74-95-3] ^	2.7	UD	ug/L	10	2.7	10	10	EPA 8260B	04/27/12 22:00	JKG	
Ethylbenzene [100-41-4] ^	1.3	UD	ug/L	10	1.3	10	1	EPA 8260B	04/27/12 22:00	JKG	
Iodomethane [74-88-4] ^	17	UD	ug/L	10	17	50	10	EPA 8260B	04/27/12 22:00	JKG	
Methylene chloride [75-09-2] ^	2.3	UD	ug/L	10	2.3	10	1	EPA 8260B	04/27/12 22:00	JKG	
Styrene [100-42-5] ^	1.1	UD	ug/L	10	1.1	10	1	EPA 8260B	04/27/12 22:00	JKG	
Tetrachloroethene [127-18-4] ^	1.7	UD	ug/L	10	1.7	10	1	EPA 8260B	04/27/12 22:00	JKG	
Toluene [108-88-3] ^	1.4	UD	ug/L	10	1.4	10	1	EPA 8260B	04/27/12 22:00	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	2.1	UD	ug/L	10	2.1	10	5	EPA 8260B	04/27/12 22:00	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	1.5	UD	ug/L	10	1.5	10	1	EPA 8260B	04/27/12 22:00	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	7.0	UD	ug/L	10	7.0	10	100	EPA 8260B	04/27/12 22:00	JKG	
Trichloroethene [79-01-6] ^	1.5	UD	ug/L	10	1.5	10	1	EPA 8260B	04/27/12 22:00	JKG	

**Description:** 5503-Lift Station

**Lab Sample ID:** C203834-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 10:15

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Trichlorofluoromethane [75-69-4] ^	2.4	UD	ug/L	10	2.4	10	1	EPA 8260B	04/27/12 22:00	JKG	
Vinyl acetate [108-05-4] ^	9.5	UD	ug/L	10	9.5	50	50	EPA 8260B	04/27/12 22:00	JKG	
Vinyl chloride [75-01-4] ^	3.2	UD	ug/L	10	3.2	10	1	EPA 8260B	04/27/12 22:00	JKG	
Xylenes (Total) [1330-20-7] ^	4.5	UD	ug/L	10	4.5	30	5	EPA 8260B	04/27/12 22:00	JKG	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>		<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
4-Bromofluorobenzene	54	1	50.0	107 %	51-122		2D26020	EPA 8260B	04/27/12 22:00	JKG	
Dibromofluoromethane	52	1	50.0	105 %	68-117		2D26020	EPA 8260B	04/27/12 22:00	JKG	
Toluene-d8	51	1	50.0	102 %	67-127		2D26020	EPA 8260B	04/27/12 22:00	JKG	

**Description:** 5503-Lift Station

**Lab Sample ID:** C203834-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

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**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

#### Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	2.20	UD	ug/L	10	2.20	20.0	6	EPA 6020A	04/24/12 12:59	VLO	
<b>Arsenic [7440-38-2] ^</b>	<b>91.5</b>		ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:32	JDH	
<b>Barium [7440-39-3] ^</b>	<b>603</b>		ug/L	1	1.00	10.0	100	EPA 6010C	04/24/12 11:32	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:32	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:32	JDH	
<b>Chromium [7440-47-3] ^</b>	<b>19.8</b>		ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:32	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>9.96</b>	J	ug/L	1	1.10	10.0	10	EPA 6010C	04/24/12 11:32	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:32	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:32	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>36.6</b>	J	ug/L	1	1.80	10.0	50	EPA 6010C	04/24/12 11:32	JDH	
Selenium [7782-49-2] ^	8.30	UD	ug/L	10	8.30	10.0	10	EPA 6020A	04/24/12 12:59	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:32	JDH	
Thallium [7440-28-0] ^	1.10	UD	ug/L	10	1.10	10.0	5.5	EPA 6020A	04/24/12 12:59	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>6.93</b>	J	ug/L	1	1.40	10.0	25	EPA 6010C	04/24/12 11:32	JDH	
<b>Zinc [7440-66-6] ^</b>	<b>107</b>		ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:32	JDH	

**Description:** 5503-Lift Station

**Lab Sample ID:** C203834-01

**Received:** 04/19/12 09:45

**Matrix:** Ground Water

**Sampled:** 04/18/12 10:15

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

### Classical Chemistry Parameters

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Biochemical Oxygen Demand [ECL-0017] ^	<b>32</b>		mg/L	1	2.0	2.0	NE	SM 5210B	04/19/12 16:08	JOC	
Chemical Oxygen Demand [ECL-0035] ^	<b>430</b>		mg/L	1	20	20	NE	SM 5220D	04/25/12 18:36	JOC	
Nitrate as N [14797-55-8] ^	<b>0.12</b>	J	mg/L	1	0.025	0.10	10000	EPA 353.2	04/29/12 18:23	CCB	
Nitrate/Nitrite as N [ECL-0010] ^	<b>0.21</b>		mg/L	1	0.025	0.10	NE	EPA 353.2	04/25/12 08:58	CCB	
Nitrite as N [14797-65-0] ^	<b>0.088</b>	J	mg/L	1	0.0030	0.10	1000	EPA 353.2	04/19/12 15:57	CCB	
Phosphorus [7723-14-0] ^	<b>1.2</b>	D	mg/L	5	0.12	0.50	NE	EPA 365.4	04/26/12 11:32	CCB	
Sulfate as SO4 [14808-79-8] ^	<b>3.9</b>	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/26/12 00:30	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	<b>1600</b>	D	mg/L	10	120	150	NE	EPA 310.2	04/24/12 11:06	CCB	
Total Suspended Solids [ECL-0169] ^	<b>59</b>		mg/L	1	1.0	1.0	NE	SM 2540D	04/23/12 12:40	KLJ	

**Description:** 5503-SW6

**Lab Sample ID:** C203834-02

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/18/12 10:00

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 22:29	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 22:29	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 22:29	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 22:29	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 22:29	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 22:29	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 22:29	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 22:29	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 22:29	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 22:29	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 22:29	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 22:29	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 22:29	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 22:29	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 22:29	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 22:29	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
<b>Toluene [108-88-3] ^</b>	<b>0.58</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>0.14</b>	<b>1.0</b>	<b>1</b>	<b>EPA 8260B</b>	<b>04/27/12 22:29</b>	<b>JKG</b>	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 22:29	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 22:29	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 22:29	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 22:29	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 22:29	JKG	

**Description:** 5503-SW6

**Lab Sample ID:** C203834-02

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/18/12 10:00

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 22:29	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	52	1	50.0	105 %	51-122	2D26020	EPA 8260B	04/27/12 22:29	JKG		
Dibromofluoromethane	52	1	50.0	105 %	68-117	2D26020	EPA 8260B	04/27/12 22:29	JKG		
Toluene-d8	50	1	50.0	100 %	67-127	2D26020	EPA 8260B	04/27/12 22:29	JKG		

**Description:** 5503-SW6**Lab Sample ID:** C203834-02**Received:** 04/19/12 09:45**Matrix:** Surface Water**Sampled:** 04/18/12 10:00**Work Order:** C203834**Project:** Lincoln County LF - Leachate**Sampled By:** Courtney Murphy**Metals (total recoverable) by EPA 6000/7000 Series Methods***^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Antimony [7440-36-0] ^	2.20	UD	ug/L	10	2.20	20.0	6	EPA 6020A	04/24/12 13:03	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	04/24/12 11:34	JDH	
<b>Barium [7440-39-3] ^</b>	<b>44.2</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.00</b>	<b>10.0</b>	<b>100</b>	<b>EPA 6010C</b>	<b>04/24/12 11:34</b>	<b>JDH</b>	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	04/24/12 11:34	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	04/24/12 11:34	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	04/24/12 11:34	JDH	
<b>Cobalt [7440-48-4] ^</b>	<b>3.15</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.10</b>	<b>10.0</b>	<b>10</b>	<b>EPA 6010C</b>	<b>04/24/12 11:34</b>	<b>JDH</b>	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	04/24/12 11:34	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:34	JDH	
<b>Nickel [7440-02-0] ^</b>	<b>2.36</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.80</b>	<b>10.0</b>	<b>50</b>	<b>EPA 6010C</b>	<b>04/24/12 11:34</b>	<b>JDH</b>	
Selenium [7782-49-2] ^	8.30	UD	ug/L	10	8.30	10.0	10	EPA 6020A	04/24/12 13:03	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	04/24/12 11:34	JDH	
Thallium [7440-28-0] ^	1.10	UD	ug/L	10	1.10	10.0	5.5	EPA 6020A	04/24/12 13:03	VLO	
<b>Vanadium [7440-62-2] ^</b>	<b>1.96</b>	<b>J</b>	<b>ug/L</b>	<b>1</b>	<b>1.40</b>	<b>10.0</b>	<b>25</b>	<b>EPA 6010C</b>	<b>04/24/12 11:34</b>	<b>JDH</b>	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	04/24/12 11:34	JDH	

**Description:** 5503-SW6

**Lab Sample ID:** C203834-02

**Received:** 04/19/12 09:45

**Matrix:** Surface Water

**Sampled:** 04/18/12 10:00

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** Courtney Murphy

### Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Biochemical Oxygen Demand [ECL-0017] ^	12		mg/L	1	2.0	2.0	NE	SM 5210B	04/19/12 16:08	JOC	
Chemical Oxygen Demand [ECL-0035] ^	46		mg/L	1	10	10	NE	SM 5220D	04/25/12 18:36	JOC	
Nitrate as N [14797-55-8] ^	0.032	J	mg/L	1	0.025	0.10	10000	EPA 353.2	04/29/12 18:23	CCB	
Nitrate/Nitrite as N [ECL-0010] ^	0.042	J	mg/L	1	0.025	0.10	NE	EPA 353.2	04/25/12 09:01	CCB	
Nitrite as N [14797-65-0] ^	0.0096	J	mg/L	1	0.0030	0.10	1000	EPA 353.2	04/19/12 15:59	CCB	
Phosphorus [7723-14-0] ^	0.15		mg/L	1	0.024	0.10	NE	EPA 365.4	04/26/12 11:34	CCB	
Sulfate as SO4 [14808-79-8] ^	1.6	JB	mg/L	1	0.04	5.0	250000	EPA 300.0	04/26/12 01:20	CCB	J-01
Total Alkalinity as CaCO3 [471-34-1] ^	15		mg/L	1	12	15	NE	EPA 310.2	04/24/12 11:07	CCB	
Total Suspended Solids [ECL-0169] ^	30		mg/L	1	1.0	1.0	NE	SM 2540D	04/23/12 12:40	KLJ	

**Description:** 5503-Trip Blank

**Lab Sample ID:** C203834-03

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/18/12 10:00

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

<sup>^</sup> - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	04/27/12 22:59	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	04/27/12 22:59	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	04/27/12 22:59	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	04/27/12 22:59	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	04/27/12 22:59	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	04/27/12 22:59	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	04/27/12 22:59	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	04/27/12 22:59	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	04/27/12 22:59	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/27/12 22:59	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	04/27/12 22:59	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 22:59	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	04/27/12 22:59	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	04/27/12 22:59	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	04/27/12 22:59	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	04/27/12 22:59	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/27/12 22:59	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	04/27/12 22:59	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/27/12 22:59	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	04/27/12 22:59	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/27/12 22:59	JKG	

**Description:** 5503-Trip Blank

**Lab Sample ID:** C203834-03

**Received:** 04/19/12 09:45

**Matrix:** Water

**Sampled:** 04/18/12 10:00

**Work Order:** C203834

**Project:** Lincoln County LF - Leachate

**Sampled By:** ENCO

### Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

<b>Analyte [CAS Number]</b>	<b>Results</b>	<b>Flag</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>MRL</b>	<b>NC SWSL</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	04/27/12 22:59	JKG	
<b>Surrogates</b>											
4-Bromofluorobenzene	52	1	50.0	104 %	51-122	2D26020	EPA 8260B	04/27/12 22:59	JKG		
Dibromofluoromethane	54	1	50.0	108 %	68-117	2D26020	EPA 8260B	04/27/12 22:59	JKG		
Toluene-d8	50	1	50.0	100 %	67-127	2D26020	EPA 8260B	04/27/12 22:59	JKG		

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D26020 - EPA 5030B\_MS

##### **Blank (2D26020-BLK1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
<i>Surrogate: 4-Bromofluorobenzene</i>	53			ug/L	50.0			106	51-122		

### QUALITY CONTROL

#### **Volatile Organic Compounds by GCMS - Quality Control**

Batch 2D26020 - EPA 5030B\_MS

##### **Blank (2D26020-BLK1) Continued**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	51			ug/L	50.0		101	68-117			
Surrogate: Toluene-d8	51			ug/L	50.0		101	67-127			

##### **LCS (2D26020-BS1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 13:11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0		82	75-133			
Benzene	17		1.0	ug/L	20.0		85	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		99	83-117			
Toluene	18		1.0	ug/L	20.0		88	71-118			
Trichloroethene	19		1.0	ug/L	20.0		94	82-118			

##### **Matrix Spike (2D26020-MS1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 13:41

Source: C204830-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0	0.21 U	81	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	99	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	88	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	98	82-118			

##### **Matrix Spike Dup (2D26020-MSD1)**

Prepared: 04/26/2012 10:30 Analyzed: 04/27/2012 14:10

Source: C204830-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0	0.21 U	78	75-133	4	20	
Benzene	16		1.0	ug/L	20.0	0.15 U	82	81-134	6	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	93	83-117	7	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	83	71-118	6	17	
Trichloroethene	18		1.0	ug/L	20.0	0.15 U	92	82-118	6	15	

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20003 - EPA 3005A

##### **Blank (2D20003-BLK1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 10:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20003 - EPA 3005A

##### **Blank (2D20003-BLK1) Continued**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 10:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

##### **LCS (2D20003-BS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	203		10.0	ug/L	200		101	80-120			
Barium	207		10.0	ug/L	200		103	80-120			
Beryllium	20.5		1.00	ug/L	20.0		102	80-120			
Cadmium	21.0		1.00	ug/L	20.0		105	80-120			
Chromium	205		10.0	ug/L	200		103	80-120			
Cobalt	213		10.0	ug/L	200		106	80-120			
Copper	203		10.0	ug/L	200		101	80-120			
Lead	208		10.0	ug/L	200		104	80-120			
Nickel	207		10.0	ug/L	200		104	80-120			
Silver	210		10.0	ug/L	200		105	80-120			
Vanadium	207		10.0	ug/L	200		104	80-120			
Zinc	203		10.0	ug/L	200		102	80-120			

##### **Matrix Spike (2D20003-MS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:07

Source: C203833-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	2.80 U	103	75-125			
Barium	281		10.0	ug/L	200	64.6	108	75-125			
Beryllium	20.8		1.00	ug/L	20.0	0.100 U	104	75-125			
Cadmium	21.9		1.00	ug/L	20.0	0.360 U	109	75-125			
Chromium	210		10.0	ug/L	200	2.93	104	75-125			
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125			
Copper	204		10.0	ug/L	200	1.60 U	102	75-125			
Lead	210		10.0	ug/L	200	1.90 U	105	75-125			
Nickel	217		10.0	ug/L	200	1.80 U	108	75-125			
Silver	210		10.0	ug/L	200	1.90 U	105	75-125			
Vanadium	210		10.0	ug/L	200	1.40 U	105	75-125			
Zinc	215		10.0	ug/L	200	3.80 U	108	75-125			

##### **Matrix Spike Dup (2D20003-MSD1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:09

Source: C203833-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	2.80 U	103	75-125	0.007	20	
Barium	267		10.0	ug/L	200	64.6	101	75-125	5	20	
Beryllium	20.5		1.00	ug/L	20.0	0.100 U	103	75-125	1	20	
Cadmium	20.9		1.00	ug/L	20.0	0.360 U	104	75-125	5	20	
Chromium	208		10.0	ug/L	200	2.93	102	75-125	1	20	
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125	0.06	20	

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20003 - EPA 3005A

##### **Matrix Spike Dup (2D20003-MSD1) Continued**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:09

Source: C203833-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Copper	203		10.0	ug/L	200	1.60 U	101	75-125	0.8	20	
Lead	208		10.0	ug/L	200	1.90 U	104	75-125	1	20	
Nickel	207		10.0	ug/L	200	1.80 U	103	75-125	5	20	
Silver	207		10.0	ug/L	200	1.90 U	104	75-125	1	20	
Vanadium	208		10.0	ug/L	200	1.40 U	104	75-125	1	20	
Zinc	205		10.0	ug/L	200	3.80 U	102	75-125	5	20	

##### **Post Spike (2D20003-PS1)**

Prepared: 04/20/2012 08:56 Analyzed: 04/24/2012 11:11

Source: C203833-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.200		0.0100	mg/L	0.200	-0.00179	101	80-120			
Barium	0.260		0.0100	mg/L	0.200	0.0646	98	80-120			
Beryllium	0.0201		0.00100	mg/L	0.0200	6.08E-5	100	80-120			
Cadmium	0.0202		0.00100	mg/L	0.0200	-4.70E-5	101	80-120			
Chromium	0.203		0.0100	mg/L	0.200	0.00293	100	80-120			
Cobalt	0.207		0.0100	mg/L	0.200	0.000417	104	80-120			
Copper	0.198		0.0100	mg/L	0.200	0.00158	98	80-120			
Lead	0.201		0.0100	mg/L	0.200	-0.00182	101	80-120			
Nickel	0.201		0.0100	mg/L	0.200	0.00133	100	80-120			
Silver	0.211		0.0100	mg/L	0.200	5.44E-5	105	80-120			
Vanadium	0.203		0.0100	mg/L	0.200	0.00113	101	80-120			
Zinc	0.201		0.0100	mg/L	0.200	0.00245	99	80-120			

Batch 2D20005 - EPA 3005A

##### **Blank (2D20005-BLK1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

##### **LCS (2D20005-BS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	196		2.00	ug/L	200		98	80-120			
Selenium	210		1.00	ug/L	200		105	80-120			
Thallium	197		1.00	ug/L	200		99	80-120			

##### **Matrix Spike (2D20005-MS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:58

Source: C203833-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202		2.00	ug/L	200	0.640	101	75-125			
Selenium	208		1.00	ug/L	200	0.830 U	104	75-125			

### QUALITY CONTROL

#### **Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control**

Batch 2D20005 - EPA 3005A

##### **Matrix Spike (2D20005-MS1) Continued**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 11:58

Source: C203833-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Thallium	195		1.00	ug/L	200	0.110 U	98	75-125			

##### **Matrix Spike Dup (2D20005-MSD1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:11

Source: C203833-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	0.640	102	75-125	2	20	
Selenium	209		1.00	ug/L	200	0.830 U	105	75-125	0.7	20	
Thallium	195		1.00	ug/L	200	0.110 U	97	75-125	0.3	20	

##### **Post Spike (2D20005-PS1)**

Prepared: 04/20/2012 09:02 Analyzed: 04/24/2012 12:15

Source: C203833-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200	0.640	103	80-120			
Selenium	211		1.00	ug/L	200	0.0955	106	80-120			
Thallium	197		1.00	ug/L	200	0.101	98	80-120			

### **Classical Chemistry Parameters - Quality Control**

Batch 2D19019 - NO PREP

##### **Blank (2D19019-BLK1)**

Prepared & Analyzed: 04/19/2012 16:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	2.0	U	2.0	mg/L							

##### **LCS (2D19019-BS1)**

Prepared & Analyzed: 04/19/2012 16:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	190		2.0	mg/L	198		98	85-115			

##### **Duplicate (2D19019-DUP1)**

Prepared & Analyzed: 04/19/2012 16:08

Source: C203665-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	8.5		2.0	mg/L		8.7			2	25	

Batch 2D19031 - NO PREP

##### **Blank (2D19031-BLK1)**

Prepared: 04/19/2012 14:32 Analyzed: 04/19/2012 15:36

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.0030	U	0.10	mg/L							

##### **LCS (2D19031-BS1)**

Prepared: 04/19/2012 14:32 Analyzed: 04/19/2012 15:38

## QUALITY CONTROL

### **Classical Chemistry Parameters - Quality Control**

*Batch 2D19031 - NO PREP*

#### **LCS (2D19031-BS1) Continued**

Prepared: 04/19/2012 14:32 Analyzed: 04/19/2012 15:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1.0		0.10	mg/L	1.00		102	90-110			

#### **Matrix Spike (2D19031-MS1)**

Prepared: 04/19/2012 14:32 Analyzed: 04/19/2012 15:58

**Source: C203834-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1.0		0.10	mg/L	1.00	0.088	94	90-110			

#### **Matrix Spike Dup (2D19031-MSD1)**

Prepared: 04/19/2012 14:32 Analyzed: 04/19/2012 15:59

**Source: C203834-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1.1		0.10	mg/L	1.00	0.088	96	90-110	2	10	

*Batch 2D23013 - NO PREP*

#### **Blank (2D23013-BLK1)**

Prepared & Analyzed: 04/23/2012 12:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	1.0	U	1.0	mg/L							

#### **LCS (2D23013-BS1)**

Prepared & Analyzed: 04/23/2012 12:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	100		1.0	mg/L	100		101	90-122			

#### **Duplicate (2D23013-DUP1)**

Prepared & Analyzed: 04/23/2012 12:40

**Source: C204210-01**

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	120		1.0	mg/L		130			10	25	

*Batch 2D24012 - NO PREP*

#### **Blank (2D24012-BLK1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	12	U	15	mg/L							

#### **LCS (2D24012-BS1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	98		15	mg/L	100		98	80-120			

#### **Matrix Spike (2D24012-MS1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:56

**Source: C204219-03**

## QUALITY CONTROL

### **Classical Chemistry Parameters - Quality Control**

Batch 2D24012 - NO PREP

#### **Matrix Spike (2D24012-MS1) Continued**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:56

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	34		15	mg/L	37.8	-2.7	98	80-120			

#### **Matrix Spike Dup (2D24012-MSD1)**

Prepared: 04/24/2012 09:42 Analyzed: 04/24/2012 10:57

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO <sub>3</sub>	36		15	mg/L	37.8	-2.7	103	80-120	6	25	

Batch 2D24033 - Same

#### **Blank (2D24033-BLK1)**

Prepared: 04/25/2012 10:12 Analyzed: 04/26/2012 11:07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	0.024	U	0.10	mg/L							

#### **LCS (2D24033-BS1)**

Prepared: 04/25/2012 10:12 Analyzed: 04/26/2012 11:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	1.5		0.10	mg/L	1.60		96	80-120			

#### **Matrix Spike (2D24033-MS1)**

Prepared: 04/25/2012 10:12 Analyzed: 04/26/2012 11:10

Source: C203657-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	3.5	D	0.10	mg/L	0.640	3.0	90	80-120			

#### **Matrix Spike Dup (2D24033-MSD1)**

Prepared: 04/25/2012 10:12 Analyzed: 04/26/2012 11:12

Source: C203657-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	3.5	D	0.10	mg/L	0.640	3.0	90	80-120	0.06	25	

Batch 2D25001 - NO PREP

#### **Blank (2D25001-BLK1)**

Prepared: 04/25/2012 06:13 Analyzed: 04/25/2012 08:43

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.025	U	0.10	mg/L							

#### **LCS (2D25001-BS1)**

Prepared: 04/25/2012 06:13 Analyzed: 04/25/2012 08:45

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.2		0.10	mg/L	1.25		97	90-110			

#### **Matrix Spike (2D25001-MS1)**

Prepared: 04/25/2012 06:13 Analyzed: 04/25/2012 08:47

## QUALITY CONTROL

### **Classical Chemistry Parameters - Quality Control**

Batch 2D25001 - NO PREP

#### **Matrix Spike (2D25001-MS1) Continued**

Prepared: 04/25/2012 06:13 Analyzed: 04/25/2012 08:47

Source: C203656-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.7		0.10	mg/L	0.500	1.2	108	90-110			

#### **Matrix Spike Dup (2D25001-MSD1)**

Prepared: 04/25/2012 06:13 Analyzed: 04/25/2012 08:49

Source: C203656-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.6		0.10	mg/L	0.500	1.2	90	90-110	5	10	

Batch 2D25008 - NO PREP

#### **Blank (2D25008-BLK1)**

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 20:55

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	1.7	J	5.0	mg/L							

#### **LCS (2D25008-BS1)**

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 21:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	50	B	5.0	mg/L	50.0		99	90-110			

#### **Matrix Spike (2D25008-MS1)**

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 22:01

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	27	B	5.0	mg/L	20.0	7.2	98	90-110			

#### **Matrix Spike Dup (2D25008-MSD1)**

Prepared: 04/25/2012 08:17 Analyzed: 04/25/2012 22:18

Source: C204219-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	26	B	5.0	mg/L	20.0	7.2	95	90-110	2	10	

Batch 2D25023 - Same

#### **Blank (2D25023-BLK1)**

Prepared: 04/25/2012 13:41 Analyzed: 04/25/2012 18:36

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	10	U	10	mg/L							

#### **LCS (2D25023-BS1)**

Prepared: 04/25/2012 13:41 Analyzed: 04/25/2012 18:36

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	500		10	mg/L	500		101	90-110			

#### **Matrix Spike (2D25023-MS1)**

Prepared: 04/25/2012 13:41 Analyzed: 04/25/2012 18:36

## QUALITY CONTROL

### **Classical Chemistry Parameters - Quality Control**

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Batch 2D25023 - Same

#### **Matrix Spike (2D25023-MS1) Continued**

Prepared: 04/25/2012 13:41 Analyzed: 04/25/2012 18:36

Source: C203834-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	690		10	mg/L	500	210	96	90-110			

#### **Matrix Spike Dup (2D25023-MSD1)**

Prepared: 04/25/2012 13:41 Analyzed: 04/25/2012 18:36

Source: C203834-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	710		10	mg/L	500	210	99	90-110	2	10	

**FLAGS/NOTES AND DEFINITIONS**

- B      The analyte was detected in the associated method blank.
- D      The sample was analyzed at dilution.
- J      The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
- U      The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
- E      The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
- MRL     Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
- J-01    Result is estimated due to positive results in the associated method blank.



**APPENDIX II**  
**STATISTICAL ANALYSIS PROCEDURE SHEETS**

## 4.3 Parametric Methods

### 4.3.1 Parametric ANOVA

#### Analysis | Parametric ANOVA

##### Description:

The one-way parametric Analysis of Variance (Parametric ANOVA) is useful for compliance to background (inter-well) comparisons.

The 1989 guidance recommends that for  $p$  wells (where  $p \geq 2$ ), there be at least 3 observations for each well and that the total sample size  $N$  is large enough that  $N-p \geq 5$ . With fewer samples, the ability to detect contamination will be reduced.

The 1992 guidance recommends that there be fewer than 15% non-detects for the parametric ANOVA.

ChemStat performs the parametric ANOVA on the entire data set for a parameter. Individual comparisons for each well are then performed.

##### Use:

For inter-well comparisons.

##### Implementation:

1. For each well, calculate the totals and means of all samples from the individual well.
2. For the  $i^{\text{th}}$  well and the  $j^{\text{th}}$  sample from the  $i^{\text{th}}$  well (including background wells), compute well totals and means as follows:

$$X_i = \sum_{j=1}^{n_i} X_{ij} : \text{the total of all } n_i \text{ observations at well } i$$

$$\bar{X}_i = \frac{1}{n_i} X_i : \text{average of all } n_i \text{ observations at well } i$$

$$\bar{X} = \sum_{i=1}^p \sum_{j=1}^{n_i} X_{ij} : \text{grand total of all observations for all wells}$$

$$\bar{X} = \frac{1}{N} \sum_{i=1}^p \bar{x}_i : \text{grand mean of all } N \text{ observations}$$

where:

$N$  = the total number of samples from all wells

$x_{ij}$  = the  $j^{th}$  sample result from the  $i^{th}$  well

$p$  = the total number of wells

3. Compute the sum of squares of difference between well means and the grand mean:

$$SS_{\text{wells}} = \left( \sum_{i=1}^p \frac{1}{n_i} \bar{x}_i^2 \right) - \frac{1}{N} \bar{X}^2$$

with  $(p-1)$  degrees of freedom.

4. Compute the corrected total sum of squares

$$SS_{\text{total}} = \left( \sum_{i=1}^p \sum_{j=1}^{n_i} x_{ij}^2 \right) - \frac{\bar{X}^2}{N}$$

with  $(N-1)$  degrees of freedom.

5. Compute the sum of squares of differences of observations within wells from the well means (sum of squares due to error).

$$SS_{\text{error}} = SS_{\text{total}} - SS_{\text{wells}}$$

with  $(N-p)$  degrees of freedom.

6. Calculate mean square quantities

$$MS_{\text{wells}} = SS_{\text{wells}} / (p - 1)$$

$$MS_{\text{error}} = SS_{\text{error}} / (N - p)$$

7. Set up the ANOVA table

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Squares	F
Between Wells	$SS_{wells}$	p-1	$MS_{wells}$	$F = MS_{wells}/MS_{error}$
Error (within wells)	$SS_{error}$	N-p	$MS_{error}$	
Total	$SS_{total}$	N-1		

8. Compare the computed F statistic with a tabulated F-statistic with p-1 and N-p degrees of freedom at the 5% significance level. This is included in Table 2, Appendix B of the 1989 guidance document.

If the calculated F value exceeds the tabulated value, reject the hypothesis of equal well means (the down-gradient wells indicate contamination). Otherwise conclude that there is no significant difference between the concentrations at the p wells and therefore no evidence of contamination.

#### Individual Well Comparisons

Up to this point, the parametric ANOVA can only show that some well shows contamination, however the specific well or wells have not been identified. The Bonferroni t-statistic test is used to determine the individual wells that show statistically elevated concentrations of the parameter.

1. Assume that of the p wells, u are background wells and m are compliance wells. Obtain the total sample size  $n_b$  of all background wells:

$$n_b = \sum_{i=1}^u n_i$$

2. Compute the average concentration from the u background wells.

$$\bar{X}_b = \frac{1}{n_b} \sum_{i=1}^u \bar{X}_i$$

3. Compute the m differences between the average concentration of each compliance well and the average concentration of the background wells.

4. For the i<sup>th</sup> well, compute the standard error of each difference as:

$$SE_i = \left[ MS_{error} \cdot \left( \frac{1}{n_b} + \frac{1}{n_i} \right) \right]^{1/2}$$

5. Obtain the t-statistic from Bonferroni's t-table (Table 3, Appendix B in the 1989 guidance) with  $(N-p)$  degrees of freedom. For more than 5 down-gradient wells, use the 1% significance level ( $\alpha = 0.01$ ), otherwise use the 5% experimentwise significance level ( $\alpha = 0.05/m$  for individual well comparisons). If  $m > 5$ , use the table entry for  $m = 5$ .

6. Compute the Critical Value ( $D_i$ ) for each compliance well.

$$D_i = SE_i \cdot t$$

7. For the  $i^{\text{th}}$  well, compute the difference between the well mean and the background mean.

$$\delta = \bar{X}_i - \bar{X}_b$$

8. If  $\delta > D_i$  the well shows a statistically significant increase in contamination.  
Otherwise, contamination of the well is not indicated.

9. Compute the residual ( $R_{ij}$ ) for each compliance well sample.

$$R_{ij} = X_{ij} - \bar{X}_{ij}$$

If the residuals are not normally distributed, the parametric ANOVA is inappropriate.

#### Remarks:

The 1992 USEPA Statistical Guidance incorrectly states, and many authors have incorrectly stated, that the data set must be normally distributed and have equal well variance for the parametric ANOVA to be appropriate. The USEPA 1989 Statistical Guidance correctly states that the residuals must be normally distributed for the parametric ANOVA to be appropriate. Shapiro-Wilks method, Shapiro-Francia method, D'Agostino's method, and probability plots are methods included in ChemStat to test the normality of the residuals. The USEPA 1992 Statistical Guidance correctly states that normality is required for the parametric prediction limit and the parametric tolerance limit.

### 4.3.2 Parametric Prediction Limit (Inter-Well)

#### Inter-Well Comparison

##### Description:

The inter-well parametric prediction limit is used to compare samples from background wells to a selected number of recent sampling dates for from compliance wells. If there are more than one sample per date, the samples for that date are averaged, and the average is compared to the prediction limit.

$$\bar{X} \pm t_{(0.99, n-1)} S / \sqrt{n}$$

ChemStat calculates the confidence interval at both the 95% and 99% levels of significance.

To determine if contamination exists in the well, the lower boundary of the confidence interval is compared to the comparison level. If the lower boundary of the confidence interval exceeds the Comparison level, the well shows a statistically significant level of contamination.

**Remarks:**

The parametric confidence interval is presented in detail in the 1989 guidance, along with two example data sets, which are included with ChemStat.

The 1992 guidance indicates that confidence intervals should not be used to compare to an MCL because it is possible for samples to exceed the MCL, and yet the mean of confidence limit would still fall below the MCL, indicating no contamination, when in fact, regulatory limits had been exceeded. The 1992 guidance also points out that unlike tolerance intervals, confidence intervals do not indicate how often individual samples will exceed the MCL.

## 4.4 Non-Parametric Methods

### 4.4.1 Kruskal-Wallis Non-Parametric Rank Method

**Description:**

The Kruskal-Wallis test is a non-parametric rank-based method that compares each compliance well to a group of background wells. It is recommended in the 1992 guidance document for data sets that do not follow a normal distribution, or have 15% to 90% non-detects.

ChemStat compares each compliance well to the background wells. Two comparisons are provided. The first comparison is performed at a minimum of 1% individual well comparison error level. The second comparison is performed at an experimentwise 5% error level, however the minimum error level may fall below the USEPA required value of 1%. The first comparison is compliant with USEPA guidance. The second comparison is less likely to produce false positives, but is more statistically accurate.

USEPA guidance recommends at least 4 observations for each well. Fewer observations will decrease the ability of the method to show statistical significance.

**Use:**

For comparison of compliance wells to background wells when data does not follow a normal distribution, or there are 15% to 90% non-detects.

### Implementation:

1. Data from all background wells are pooled and the background is considered a group. Each compliance well is then also considered a group. For  $n$  observations in each of  $k$  groups, and  $N$  total observations:
  2. Rank all  $N$  observations from least to greatest.  $R_{ij}$  is the rank of the  $j^{\text{th}}$  observation for the  $i^{\text{th}}$  group. Consider the background wells as group 1.
  3. For each group, calculate the sum  $R_i$  and mean  $\bar{R}_i$  of the ranks.
  4. Calculate the Kruskal-Wallis statistic ( $H$ ):

$$H = \left[ \frac{12}{N(N+1)} \cdot \sum_{i=1}^k \frac{R_i^2}{n_i} \right] - 3(N+1)$$

5. Compare the calculated Kruskal-Wallis statistic to the tabulated chi-square value with  $(k-1)$  degrees of freedom (Table 1, Appendix B 1989 guidance). If the computed value exceeds the tabulated value, there is evidence of contamination in at least one compliance well.
6. For each compliance well, compute the critical difference ( $C$ ) of the well comparison to background.

$$C_i = Z_{(\alpha/(k-1))} \left[ \frac{N(N+1)}{12} \right]^{1/2} \cdot \left( \frac{1}{n_1} + \frac{1}{n_i} \right)^{(1/2)}$$

where:

$n_1$  is the number of background samples (group 1 is considered the background group), and

$Z_{(\alpha/(k-1))}$  is the upper  $(\alpha/(k-1))$  percentile of the standard normal distribution (Table 4, Appendix B, 1989 guidance). The 1989 guidance recommends that for  $(k > 6)$ , use  $Z(0.01)$ , the upper 1 percentile of the standard normal distribution.

Note that the above equation is presented incorrectly on page 5-16 of the 1989 guidance. The second exponent of  $\frac{1}{2}$  has been omitted.

7. For each compliance well, compare the difference of the average rank and the background average rank to the critical difference computer in step 6. If the critical difference is greater, the well shows evidence of contamination.

### Adjusting for Ties:

ChemStat adjusts for tied observations for non-detect values only.

### Remarks:

The Kruskal-Wallis test can only determine which compliance well is elevated with respect to background, but can not determine which specific samples cause the statistical trigger.

The 1992 guidance example problem for the Kruskal-Wallis method has an error. On page 43, the rank sum and rank mean for Well 3 are given as 51 and 10 respectively. The rank sum and rank mean should be 61 and 12.2 respectively.

## 4.4.2 Wilcoxon Rank-Sum Inter-Well Comparison Analysis | Wilcoxon Rank-Sum (Inter-Well)

### Description:

The Wilcoxon Rank-Sum method is a non-parametric method for comparing a selected compliance well to the background well.

ChemStat performs the comparison at the 99% level of significance.

At least four samples are recommended for each well.

### Use:

For comparison of a single compliance well to background wells when data does not follow a normal distribution, or there are 15% to 90% non-detects.

### Implementation:

1. For n compliance wells, and m background wells, with N total samples, combine the compliance and background well data and rank the ordered values from 1 to N.
2. Calculate the Wilcoxon statistic (W):

$$W = \sum_{i=1}^n C_i - \frac{1}{2} n(n + 1)$$